Clinical Lecture
ON
CROUP, AND THE DISEASES THAT RESEMBLE IT.

BY SIR WM. JENNER, BART., M.D., K.C.B., F.R.S.,
PHYSICIAN IN ORDINARY TO THE QUEEN AND THE PRINCE OF WALES;
PROFESSOR OF CLINICAL MEDICINE IN UNIV. COLL. LOND.;
PHYSICIAN TO UNIV. COLL. HOSPITAL.

GENTLEMEN,—There are no cases more trying to the young practitioner than those the chief symptoms of which are due to impediment to the passage of air through the larynx. There is no time to think over such a case; the patient needs to be relieved at once. The friends are alarmed, and properly so; for death is, in every such case, imminent. The degree of danger, the probability of a fatal termination, varies, however, with the nature of the cause of the impediment.

The acute diseases which I have seen thus impeding the passage of air through the larynx I may enumerate as follows:—Œdema of the aryteno-epiglottidean folds; rapidly developed inflammation, terminating in suppuration, of a cyst in the immediate vicinity, or in the substance, of one aryteno-epiglottidean fold; suppurative inflammation of the cellular tissue external to the larynx, compressing the larynx; catarrhal inflammation of the larynx; membranous inflammation of the larynx; paralysis of the larynx; spasm of the larynx.

You will at once see that the relief possible to be afforded in these cases varies considerably, and that the mode of giving the relief must also vary. To confound, as I have seen confounded, a collection of matter external to the larynx with membranous inflammation of the larynx itself, is to cause, if I may say so, the death of the patient; for the means which it would be proper to use in membranous inflammation of the larynx would, I need not say, be impotent as a remedy for the difficulty of breathing due to a deep-seated collection of matter in the cellular tissue. Hence I am about to-day to describe the means of distinguishing from each other these various forms of difficulty of breathing, and at the same time to point out to you the mode of affording relief to the patient in the several special affections.

I think we shall best clear the way, so to speak, by considering first the two diseases which, in the above enumeration, I have placed last—spasm and paralysis of the larynx.

"Laryngismus stridulus," "spasmodic" or "false croup," is limited to infants, especially affecting children during the period of dentition. It is supposed by many to be a reflex action, the source of irritation being the teeth. This idea is favoured by the fact that the majority of children who suffer from laryngismus stridulus have, for their age, too few teeth. We shall see presently, however, that it is doubtful whether the relation between the two conditions is one of direct causation.

The symptoms of laryngismus stridulus are so marked that, once aware of the existence of such a disease, you can hardly confound it with any other. He who had never seen a case before would know it at once if he were acquainted with its symptoms. It needs no experience to make the diagnosis.

You will see a great many children who, from the description of their attacks by their nurses, you know to be the subjects of laryngismus stridulus, before you see the child in the attack itself, and for the reason that the attack rarely lasts more than a few seconds. It is often brought on by trifling causes, and the nurse may be able to tell you what will bring it on. So, if disposed to witness the symptoms of laryngismus stridulus, you may be tempted to induce an attack. But remember that a child not very unfrequently dies in an attack; and I myself, twice, in my comparatively inexperienced days, nearly killed a child by bringing on an attack—once that I might myself witness the attack, and once, years after, that I might show it to my class.

I will describe to you, briefly, the characters of a severe attack of laryngismus stridulus. The child is seized suddenly with an inability to inspire. It seems as if about to die from inability to get the breath through the larynx. At this time there is no noisy breathing, no "croupy" sound. The larynx seems absolutely closed. The face and lips are slightly livid, but pale, often very pale. There is no movement of respiration, and the child, as in one of the cases to which I just referred, that in which I was displaying the case to my class, may seem dead. I thought it was dead; the mother thought it was dead, and flew from the room, leaving the child in my arms. The students around thought of course with the mother and myself. Then comes a crowing inspiration. The larynx is evidently partly open, and entering air produces a crowing sound. The child gets its breath, its colour returns, and in a few minutes it is as well as it was before. In the case to which I have alluded, when the mother returned in a few minutes with her husband to take the child away, it was sitting up and laughing at one of the students. When this occurred I had never seen a fatal case, and did not know the dangerous nature of the trial, for, instead of getting its breath, the child may die—may die in an instant. The rapidity with which death occurs is remarkable. Not long since I saw a child who had had many attacks, but was supposed to be having them much less severely. I saw the child in its room, well, as I was assured, and as it seemed, so far as its breathing was concerned. It had had fewer and less severe attacks than it had been in the habit of having. But I had not reached the door when the child was dead.

The attacks are not at first so severe as that which I have described to you. Usually the mother or the nurse notices a little crowing inspiration, perhaps on first waking, perhaps only when the child is danced, when something startles it. In the intervals the child is, as regards its breathing, and may be in the opinion of the friends, in tolerable health. It is said perhaps to be quite well in the intervals of the attacks. We shall see presently that it is not well.

When the attacks are severe the friends will often bring the child to you, saying that it has "fits." So beware, when you hear that a child has had many fits, that you inquire a little into the case before you conclude that such fits are ordinary convulsions. The crowing inspiration, so peculiar and characteristic, will always enable you to separate this laryngeal affection from convulsions commonly so called. At the same time, remember that it is not uncommon to have contractions of the thumbs and great toes, and not very rare to have contractions of all the fingers, of the wrists and the ankles, so that the hand may be flexed and rigid, and the soles of the feet turned inwards, and the feet extended, between the attacks, and sometimes the child has attacks of general convulsions.

This affection of the larynx, this spasm which closes the larynx, and so interferes with the entrance of air into the chest, never lasts long enough to produce extreme lividity. The appearance of a child is rather that of fainting, with slight blueness as well as pallor. The child either dies, or, the spasm relaxing, air enters, and it recovers. There is no period of imperfect aeration of blood—i.e., of lividity, but sudden and absolute closure of the passage through the larynx.

This spasm of the larynx is said to be due, in some cases, to cerebral congestion. Formerly it was supposed that the great bulk of such cases depended on this, and I remember that when I was a young practitioner the first question one asked oneself concerning such a case was, Is it dependent on cerebral congestion? As the great bulk of the cases were held to be due to that cause, leeching was common, and I, unfortunately, was the unhappy cause of the death of a child by leeching. The leech divided imperfectly a twig of the temporal artery, and the loss of blood killed the child.

Now, I may say that for the last twenty-five years I have not seen a single case of laryngismus stridulus depending on cerebral congestion, and, therefore, I have strong misgivings whether I ever did see one. There is no doubt that laryngismus stridulus is occasionally conjoined with hydrocephalus, but whether in such cases the laryngismus is due to the hydrocephalus is in my mind a matter of very grave doubt. I am inclined, and very decidedly inclined, to the

opinion that the two are due to a common cause, to the constitutional state to which I am about to refer, as that which is all but invariably present in laryngismus stridulus—namely, rickets. Laryngismus stridulus is exceedingly common in rickety children, and, where the larynx is in other particulars healthy, is almost limited to rickety children. Now you will understand why it is that these children, the subjects of laryngismus stridulus, are so often supposed to be the subjects of difficult dentition; for you know, I trust, that rickety children are very late in cutting their teeth, and that the retarded dentition is not the result in these cases of any difficulty in the passage of the tooth through the gum, but is due to a want of developmental power. So, in these cases, the large head so often present is due, remember, to that peculiar condition of the white matter of the brain, especially of the anterior lobes, which is common in rickets. And, again, the wide fontanelle is the result, not of the accumulation of fluid within the cranial cavity, not to excess of blood there, but to defective bone growth, and is part of the local manifestation of the rickety cachexia.

All this will lead you, I think, to the conclusion that laryngismus stridulus occurs in those of weakly constitution, as it is termed. You know how sensitive the nervous system of the child is, how easily convulsive affections are induced in children. Even in the healthy child the nervous system is, as some one has expressed it, "always at full-cock, ready to go off like a hair-trigger." You know, moreover, that whatever weakens anyone renders their nervous system more irritable, more sensitive, and such a person is liable to be thrown into a convulsion by trifling causes. I mean by "trifling causes" that the exciting cause need be but trifling. In all intermitting convulsive affections—epilepsy, hysteria, for example—we have the two conditions to consider: the general state of the nervous system and the excitant of the attack. Here, in laryngismus stridulus, the excitant may be the stomach, bowels, teeth—in fact, at any part of the system. In treating such a case we look for the excitant; but this is often out of our immediate reach, sometimes—often—not to be found. We have seen how trifling it may be—a draught of cold air, a start may suffice. When we know it we cannot in the majority of instances guard the patient from the direct excitant, but we may in almost all instances render the child's system so strong—remove, that is, the extreme excitability of the nervous system—as to render the child insusceptible to the attacks.

In treating laryngismus stridulus, therefore, you must endeavour so to strengthen the child that its nervous system may be less sensitive. We do this first by attention to the child's diet. In a large number of cases the child is being underfed, or fed with food unsuited to its years—rather, perhaps, one should say, unsuited to its stage of development. As I have told you, these rickety children are developed below their years.

We endeavour to strengthen the child's constitution, also, by careful general management. Many of these children are kept in the house. They are said to be subject to attacks of croup, and they are kept in-doors that they may not catch cold. You must insist upon their getting fresh air. You must attend likewise to the various other points proper for the treatment of rickets and the constitutional cachexia from which the child is suffering, by the administration of iron, cod-liver oil, and generally of that class of remedies. Cod-liver oil is, as you know, considered by some to be a specific in the treatment of rickets. Attention must be given especially to the state of the bowels. But remember that you will do harm by attempting to correct disordered secretion by courses of alterative treatment. The mildest aperients occasionally are all that is required—a little rhubarb or rhubarb-and-soda. I cannot tell you the horror with which I regard the excessive use of grey powder in these cases.

Lastly, the bromides of potassium and ammonium have a special effect in rendering the nervous system less sensitive to reflex irritation, and are of great service in preventing the attacks of laryngismus stridulus till such time as the constitution is strengthened by other means. Bromide, according to my experience, should be given in rather large doses at infrequent intervals. Full doses night and morning are, I think, better than small doses frequently repeated during the day.

I have referred to paralysis of the larynx. There are persons who maintain that laryngismus stridulus itself is a paralysis of the larynx; but the disease to which I refer is certainly a very different affection from laryngismus stridulus. There is constant noisy inspiration—crowing, but hoarser rather than the crow of laryngismus stridulus. There is little evidence of impediment to the entrance of air—I mean, as manifested by the recession of the soft parts. Although it may begin pretty acutely, the disease is a chronic one, and is quickly separated from any of the other diseases of the class to which I am now directing your attention. So far as my experience goes it is a rare affection. I have seen a few cases. The best marked terminated in extensive cerebral softening, and was, I think, connected with the syphilitic cachexia.

Laryngismus stridulus—this pure spasm of the larynx (for if the child dies no trace of laryngeal affection remains) is almost limited to the rickety, and is quite limited to the young child—the infant. But it is not uncommon, nay, I should say it is very common, to have a certain amount of spasm, often a considerable amount, superadded to a catarrhal affection of the larynx in children of a more advanced age, during the first dentition, and occasionally in older children of from five to eight, nine, or ten years of age. This disease is not unfrequently confounded with true croup, and the diagnosis is often very difficult in a first attack, for some time at least; nay, I think I may say that it is almost impossible to be sure at the outset of the affection that you have not to deal with a case of true croup. I say "in a first attack," for children who have had one such attack are very liable to a recurrence of the disease, and these are the children who are said to have had "several attacks of croup." I say "these are the children who are said to have had several attacks of croup," because no child ever has several attacks of true croup, and certainly would not have recovered from several attacks; true croup being, as we shall see, one of the most fatal diseases of childhood.

This disease, catarrhal laryngitis accompanied with spasm, begins with a little febrile disturbance and a little hoarseness, perhaps a little cough. The child is supposed to have caught cold. It goes to bed, and, in an hour or two, wakes up with considerable difficulty of breathing. The breathing is not only difficult but noisy, and the child, if it be of any age, is commonly alarmed. You find it more or less feverish, usually sitting up in bed, and with the tracheal breathing. On listening to the chest it is not uncommon to hear a little sonorous rhonchus. It is at this stage of the affection that the diagnosis is difficult—as I say, in many cases impossible. But bear this in mind, that experience shows that the great bulk at least of cases of so-called croup are really cases of diphtheria, and that diphtheria commencing in the larynx—i. e., the exudation commencing in the larynx—is exceedingly rare. Usually, as we shall see presently, it commences in the pharynx and spreads downwards to the larynx; and although the pharyngeal symptoms may have been most trifling, you will usually find, on examining the pharynx, unequivocal evidences of the diphtheritic nature of the disease. So, if you were called to such a case as I have just described to you, you would at once examine the pharynx.

These cases of catarrhal laryngitis with spasm are the attacks that are so quickly cured by an emetic. An emetic acts in such a case, it seems to me, in three ways. In the first place, it empties the stomach completely, and in doing so it removes one source, a common source in the child, of reflex action; secondly, by the nausea and slight faintness it produces, it relaxes the spasm; and, thirdly, it promotes free secretion from the laryngeal and bronchial mucous membrane, and so relieves the catarrhal affection. The best emetic is ipecacuanha. Usually the action of the emetic is sufficient to make the diagnosis clear. The patient is at once relieved, falls asleep, breathes quietly, showing how large a share spasm played in the affection. In the morning the child awakes free from febrile disturbance, and only a little hoarseness remains to tell the nature of the case. Persons who have a child subject to this affection have commonly learned the value of emetics, and I have known those who in travelling always took with them an emetic lest the child should have an attack of "croup." After the emetic has acted it is well to clear out the bowels by a brisk purgative, as, for example, a dose of calomel and jalap. Without treatment the disease will subside, but then it will

last much longer. I have seen a case, left to itself, go on, with spasm varying in degree, for two or three days.

The affection, then, consists in a catarrhal inflammation of the larynx, with spasm superadded. It is a local affection, and when frequently repeated occasionally leaves behind it a disagreeable hoarseness. The child's voice is a little changed. It is probable, certain in some cases, that a little thickening of the mucous membrane remains from the repeated attacks of catarrhal inflammation.

Children subject to this affection do require considerable care. They are susceptible to cold, and especially to damp cold. A single exposure is often sufficient to induce an attack. So you must urge upon the friends the greatest care to avoid the exciting cause. The strongest children may suffer from it. It is in no way connected with the rickety or other cachexia.

(To be concluded.)

Clinical Lecture

ON

OPERATIVE MEANS FOR THE RELIEF OF PATIENTS SUFFERING WITH ADVANCED PROSTATIC DISEASE.

Delivered at University College Hospital, Dec. 18th, 1874,

BY SIR HENRY THOMPSON,

SURGEON EXTRAORDINARY TO H.M. THE KING OF THE BELGIANS; PROFESSOR OF CLINICAL SURGERY, AND SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—I propose to call your attention to an extremely distressing and painful form of disease, for the relief of which our resources are very inadequate. I refer to the last stage of complete or permanent obstruction existing at or about the neck of the bladder. By obstruction, I mean, to the outflow of urine by any natural efforts. In speaking of its existence "about the neck of the bladder," I of course exclude stricture of the urethra, which, moreover, opposes only a partial or temporary obstruction to the passage of urine. When obstruction is not only complete but permanent, disease of the prostate is mostly the cause.

We have studied together the diseases of that organ, and especially that common form hypertrophy, and will not therefore go over that ground again. I will merely remind you that very many individuals between fifty-five and sixty years of age begin to be unable to expel entirely the contents of the bladder. The act of micturition is more frequently performed, and requires some effort; the stream grows feeble, and, under the influence of external cold, or of some diuretic action distending the bladder, or other cause, it often happens that complete or nearly complete retention is established. In such a case the bladder is generally not emptied at any act in the most favourable circumstances; and if, immediately after an attempt to do so, a catheter be passed, a notable quantity, say from three or four to twenty ounces, will be left behind, and is drawn off by the instrument. Consequently the patient is taught to use the catheter, and does so periodically, say twice, three times, or more frequently, according to his necessity, in the twenty-four hours. As the patient increases in age the bladder often requires relief six, seven, or eight times per diem—a number by no means uncommon.

But in some cases, which happily are only exceptional, a more advanced stage arrives, by gradual steps, associated with a greatly diminished capacity of the bladder, so that the use of the catheter becomes necessary from sixteen to twenty-four times, or more, in the twenty-four hours—a condition of extreme misery for the patient, inasmuch as it entails loss of rest, fatigue, and often also increased difficulty in passing the instrument from injury to the urethra by frequent catheterism. At this period, too, the augmented volume of the prostate sometimes makes the canal difficult to traverse alike for the patient and the surgeon; and if a false passage be made by either at this crisis, a fatal result almost of necessity follows.

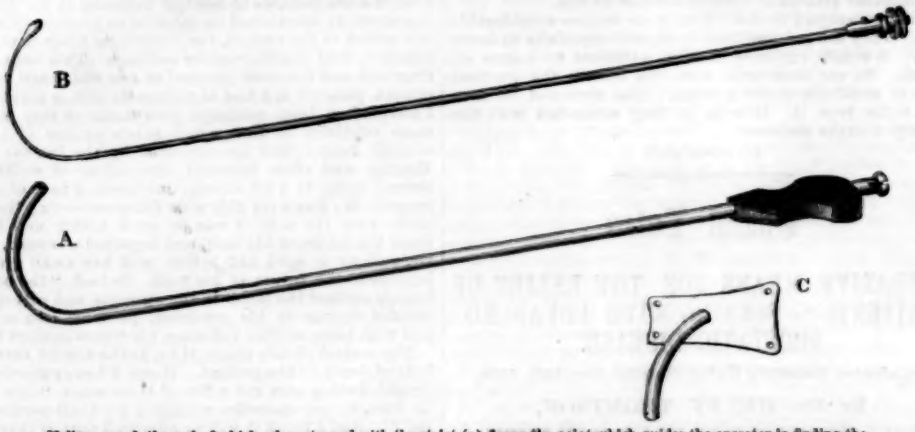
A patient in these circumstances, then, exists for little else than to pass his catheter. No sooner has he obtained a half-hour's relief than he begins to feel the warning of another approaching call, and on each occasion he experiences some minutes at least of suffering in his endeavour to sustain as lengthened an interval as possible. His powers are tasked to the utmost, for continuous sleep is out of the question, and health rapidly declines. This hourly recurring task and the brief interval of rest which fall to the lot of such patients is a test of endurance of the severest kind. I have often been reminded that theirs is very much the same condition as that which exists as one of the chief athletic feats—first accomplished by the famous Captain Barclay, and often repeated since—that of walking 1000 several miles in 1000 consecutive hours, a task of no small magnitude; but with this wide difference—viz., that in the latter case the subject was in good health and training, knew the limits of his task, and expected a reward, whereas the patient is aged and infirm, and has small ground for hope as to the future of his trial. Indeed, "the odds" are largely against the latter in the struggle, and without a very decided change in his condition, he must lose miserably, and with inexpressible suffering, his "race against time."

The arrival of this stage, then, is the almost certain prelude of death to the patient. Hence I have naturally asked myself, having seen not a few of these cases, "Can nothing be done, by any operative measures, for their permanent relief?" And I think it will be admitted that, if these should be somewhat difficult or even be attended with some risk, the gravity of the situation warrants an attempt, if only a moderate chance of affording relief appears to be attainable. I say "permanent relief," because a temporary remedy exists for some in the employment of an in-lying catheter. To tie in an elastic or india-rubber catheter is an expedient which may avert the fatal result a little; but it can be only temporary, and it may even aggravate the malady and hasten the end. I assume also that medicinal agents, including especially opium, have ceased to suffice for the exigencies of the case. The bladder is, indeed, so organically thickened and diminished in capacity that hourly relief has become a *physical* necessity.

I propose, then, in these circumstances a proceeding similar to that which we employ in the trachea when death is imminent for want of air—viz., the introduction of a tube beyond the seat of obstruction—one which is to be permanently retained there as the constant channel for urine, just as the tracheotomy tube has been for many a patient the only channel during years for air to the lungs. In other words, I propose to puncture the bladder above, or rather behind, the pubes. The proceeding which I have practised differs from ordinary puncture, and more resembles the high operation for stone, being rather a compound of the two. For, in the cases described, it must be remembered that the bladder is by no means distended with fluid, but may and must be nearly empty—a widely different condition, as regards operation, from the ordinary puncture. Moreover, the viscus is usually altered in position and largely deformed by masses of prostatic growth rising into its cavity, and sometimes even nearly filling the pelvis. I believe that puncture has never been done or recommended with this end in view—viz., to avert death by establishing a *permanent* outlet for urine when the urethra is no longer practicable through disease of the prostate and bladder. I do not overlook some interesting examples of retention of urine from stricture which were relieved by suprapubic puncture by my friend Mr. Thomas Paget of Leicester, and in which the tube subsequently became for years the permanent channel by which all urine passed. These operations, however, were not performed with that end in view, nor were they for prostatic retention at all; but it was the comfortable condition of these patients, whom I saw, which led me to think of the analogous proceeding which I now desire to put on its trial.

The operation, which I have now performed three times, consists in passing a large sound, hollow throughout, with a strongly marked curve; that represented at A in the adjoining figure I have found as good as any, but it may be modified somewhat, according to the case, and closed by a

bulbous-ended stylet (B). The instrument is introduced by the urethra until the end can be felt just behind the symphysis pubis. It is then confided to an assistant to retain in its place. The operator now makes an incision not more than three-quarters of an inch in length, less if the patient is not stout, enough to admit the index finger tightly (since a large opening becomes embarrassing subsequently), in the median line at the upper margin of the symphysis. The tissues are separated by the finger, and the linea alba being next slightly divided by the point of a bistoury, the finger is passed down closely behind the symphysis, and when the end of the sound is clearly felt, a little opening is made so as to expose its point. The operator now, taking the handle of the sound in his left hand, makes the end protrude in the wound, the bulbous stylet is withdrawn, and he passes the tube C in its whole length into the hollow channel of the



A, Hollow sound, the end of which, when stopped with the stylet (B), forms the point which guides the operator in finding the bladder in the last incision. Size about 12 or 13.
B, Bulbous-ended flexible metal stylet.
C, Suprapubic tube of elastic gum about 2½ in. long, with silver plate, introduced in its whole length into the sound when the stylet is removed. The withdrawal of the sound leaves the tube in the bladder.

sound. He now withdraws this completely by the urethra, and in doing so necessarily ensures the passage of the elastic tube into the bladder.

When I first designed this proceeding I used a sound with a second stylet having a sharp trocar at the end to take the place of the first, intending to make the incision for the tube by merely pushing the trocar from within the bladder outwards to the skin, after which the tube would be inserted and lodged in its place by withdrawal as above. I learned, however, by several experiments on the dead body that although this was safe and easy of performance in a distended bladder, the peritoneum was usually wounded when the bladder was empty. Hence my abandonment of what seemed a very simple and easy proceeding. The path of safety therefore is to make a very small opening directly above the symphysis, then to find the way close behind it to the end of the sound there, and incise only just enough to allow this to be pushed up into view. The insertion of the tube into the hollow of the sound, and the withdrawal of the latter, as already stated, brings the tube into its place. But it may be remarked that the urine may not at first flow through it, for the withdrawal of the sound may carry the tube, not only into the bladder, but, when this is empty or very contracted, even through it into the prostatic urethra. If so, the tube has only to be withdrawn a little and the urine flows. Indeed I have found that the tube is usually improved, especially in the subsequent progress of the case, by being a little shortened. It is then to be fastened securely with tapes and plaster, and to be worn a few days in bed until the parts are consolidated, and the patient can move about with safety. If the tube escapes during the first two or three days it may not be easy to replace it, but when the passage is established it may be removed and replaced easily enough. A very important injunction is to make the wound as small as possible so as to be nearly filled by the tube. A large wound is more painful, and is constantly traversed by the urine.

I will now briefly sketch the three cases in which I have done this, and give you the results.

The first patient was a man sixty-three years of age, admitted into this hospital January, 1869. He had for several years passed all his water by catheter, and for a long period had done so every hour and a half day and night, sometimes oftener. Examination by rectum showed the existence of a large prostate, the coats of the bladder were thickened, the urine charged with inflammatory products. He remained three months, and, notwithstanding rest and treatment, but slightly improved. It was evident that his troubles were not due to temporary irritation, but to organic changes greatly diminishing the capacity of his bladder as a reservoir. I need hardly enlarge on the importance of carefully drawing this distinction. Having explained to him fully in presence of the class the nature of his case and the design of my operation, he gladly accepted my proposal that I should do my best to relieve him. The operation was easily performed on the 12th of May, in the manner described, with immediate relief to the patient. Unluckily, on the third or fourth night the tube escaped, and the house-surgeon was unable to introduce it. The urine issued freely by the wound. The next day, at my visit, it was but too obvious that the walls of the new passage had not been yet sufficiently consolidated to protect the surrounding parts, and that extravasation had taken place into the scrotum. I at once made free incisions and tied in a catheter. It was a severe trial for the patient, but he came triumphantly out of it. The following six weeks, however, were occupied with this unfortunate accident and its results; meantime I had at an early period, and without difficulty, put the tube in its place and made it fast there by tapes and plaster. A week or two after the route was established and the tube was removed, washed, and replaced with the greatest ease every day. During the summer his health continued feeble; no catheter was necessary, the urine passing by the tube, but from insufficient attention to changing and cleaning it, phosphatic deposit formed on it, and gave much trouble. I lost sight of him in July, and he gradually failed in strength, and died in September.

The second case was that of an old and well-known medical friend, on whom in 1867 and in 1869 I had successfully operated by lithotrity. For a long period he had passed all his urine by instrument; he was now upwards of seventy-five, and had, after many years of trouble, arrived at the latest stage of frequent and painful catheterism. I was called to him in January, 1870, suffering from such extreme sensibility that he dreaded passing the catheter, which was necessary twelve times in the day and night. He was clearly approaching his end, and I agreed to perform this operation solely with the view of making his last days more comfortable. Mr. Clover gave him chloroform, and I did it on Feb. 7th. All went well; he never required the catheter again; he kept his bed, was comparatively free from suffering, and died three weeks afterwards.

The third case was probably seen by some of you here last spring. E. P——, aged fifty, was admitted to this hospital April 22nd, 1874, having suffered from severe symptoms four years, the last two and a half of which he has withdrawn all his urine by catheter. Of late his sufferings have been great; his catheter is passed every half hour in the day, and he sometimes retains one for a part of the night. The prostate was "hard, nodulated, and enlarged"—a condition of very bad augury, occurring as it did before the age at which hypertrophy of the prostate appears. On May 7th I performed the operation described, with the view of diminishing his pains and affording him rest. It was followed by relief, especially after the first day or two, and he gained long periods of sleep, which he had not had for months before. Nine or ten days after the operation he showed signs of failing strength, and he sank on the 21st inst. The autopsy showed cancer of the prostate and adjacent part of the bladder, of the scirrhus kind—the only case I have ever seen. The iliac glands, those about the base of the lungs, and the lungs themselves, showed the presence of the same deposit to a considerable extent. The only other authentic case on record is that reported by Mr. John Adams.* The word "scirrhus," it should be remembered, has been often erroneously used, particularly by ancient authors, to denote organs which are enlarged by hypertrophy.

I have thus put the bare facts before you relative to these three cases. Little need exists for remark. In two of them, the second and third, the operation was adopted solely as a last resource, to mitigate the sufferings of patients whose fate was already sealed. In the first I operated at a somewhat earlier period, with the view of prolonging and rendering more comfortable a possible year or two of life. The unfortunate accident of extravasation was too great a demand upon the resources of the patient, and, although he recovered, yet his stock of vitality was largely exhausted. We must recollect that it was the first experience, and I gathered from it useful lessons. I made the opening much smaller afterwards, took redoubled care to retain the tube at first, and subsequently I should in such a case remove and wash it daily. The operation itself, properly performed, makes little or no demand on the patient's powers. I have no doubt I shall give it further trials. Thus prepared by past experience I have faith in its utility for appropriate cases.

Clinical Lectures
ON
AFFECTIONS OF THE BLADDER IN THEIR RELATION TO UTERINE AND PERI-UTERINE DISEASES.

BY ROBERT BARNES, M.D.,

OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL; EXAMINER IN OBSTETRICS TO THE UNIVERSITY OF LONDON AND THE ROYAL COLLEGE OF SURGEONS.

LECTURE I.—PART I.

WHEN a patient complains of pain in a particular organ, or of difficulty in the performance of its function, it does not necessarily follow that that organ is the real seat of disease. This is eminently true of the bladder in women; so true, indeed, that in the majority of cases of bladder distress the cause will be found outside the bladder. To estimate rightly the significance of subjective complaints referred to the bladder, we are therefore necessarily led to institute an objective examination not alone of the bladder but of the other pelvic organs as well.

The bladder is so intimately associated with the uterus and vagina, and so constantly participates in the affections of these organs, either directly or indirectly, that the clinical study of symptoms referred to it is daily forced upon the gynæcologist. In many instances these symptoms are induced by disease of the uterus, ovaries, or vagina; the bladder being only affected by irritation propagated from its neighbouring organs, or being hindered in its function by pressure of these organs displaced or enlarged. *Proximus ardet.* In another series of cases, disease commencing in the uterus or vagina spreads to the bladder, when symptoms of bladder disease will, of course, be added to those of the primary disease. In a third series, the primary seat of disease is in the kidneys or bladder. I think it may be affirmed that cases of this last series are the least frequent. In these cases the chief symptoms will naturally be referred to the bladder, but uterine or ovarian distress will often be entailed.

As it does not fall within our theme to discuss the strict diseases of the kidneys and bladder, it may be useful to point out at the onset the leading indications by which they may presumably be distinguished from cases of the first two series, and especially from those of the first. Strict kidney and bladder diseases are recognised by functional derangement of those organs, by correlated constitutional disorder, by alterations in the characters of the urine, and by physical examination. Severe pain in the region of the kidneys, occurring in paroxysms, attended by vomiting, and the presence of pus, blood, gravel, or calculi in the urine, point to the kidney as the source of trouble. The presence of albumen, casts, uric acid, oxalic acid, sugar, pus, or blood, usually points to structural changes in the kidneys or bladder, or to functional disorder of the nutritive apparatus. This proposition is generally true; but pus and blood may find their way into the bladder through a fistulous communication with an ovarian cyst, or be formed in the bladder as the consequence of obstruction to excretion. So that even the most probable indications of strict kidney and bladder distress should not turn us away from the direct exploration of the neighbouring pelvic organs. Of course this exploration will be the more imperative if we learn that there are subjective symptoms referred to the ovaries, uterus, or vagina. If we follow the rule of systematically investigating the condition of all the pelvic organs when one of them shows signals of distress, we may now and then discover, *after the event*, that we have done something superfluous, but we shall always have the satisfaction of knowing that we have taken the best course to avoid error in diagnosis, and consequent risk of adopting useless or injurious treatment.

There are

Bladder complications due to mechanical conditions of the pelvic organs.

Of these the most important is *retention of urine* from obstruction of the urethra. This imperiously urgent symptom may come on suddenly, or it may be preceded by attacks of dysuria or partial retention. In almost every case retention of urine in women is the consequence of pressure arising outside the bladder. It is therefore a symptom, not of bladder disease, but of disorder of other pelvic organs. Retention from atresia or stricture of the urethra, or from blocking by a calculus, is extremely rare in women. The canal is short, of large bore, and easily distensible; in all these respects differing from the male urethra. Pressure may be developed in a few hours so as to completely compress the urethra against the symphysis pubis. The bladder filling above the obstruction, the symptoms of retention quickly follow. Or the pressure may be developed very slowly, as when a fibroid tumour is enlarging in the pelvis. So long as the pressure does not completely obstruct the urethra, the retention will be only partial. Or the retention may be intermittent. This may be due to changes in the position or size of the obstructing body. All pelvic tumours are apt to induce more pressure at the menstrual epochs than in the intervals. This is not necessarily because the tumours themselves are increased in bulk at these times, but more often because of the general increase of turgidity of all the pelvic structures.

The diagnosis of retention of urine is not always easy; at least, in practice it is occasionally not made out. This is because retention is rarely absolute. Under the enormous hydrostatic and expulsive pressure brought to bear when the bladder is greatly distended, a little urine will be

* THE LANCET, 1853, vol. i., p. 304. I made the most careful researches several years ago in relation to this subject with the result stated above. Encephaloid cancer of the prostate is far less rare.

driven along the urethra, and, escaping externally, impose upon patient and attendants the belief that the bladder empties itself.

Stillicidium or dribbling attended by that form of dysuria which may be called bladder-tenesmus or straining, is presumptive evidence of retention more or less complete. It may look paradoxical, but it is nevertheless true that the loss of control over the sphincter vesicæ, resulting in loss of power to hold the urine, is proof of retention.

Failure to recognise the significance of this state may involve the most disastrous effects. Retention cannot be endured many hours without involving the risk of serious damage to the bladder and kidneys, and the absorption of urinous elements into the blood.

It should therefore be established as a rule in practice, in all cases of stillicidium urinæ as well as of complete retention, to examine by catheter. The slight overflow or dribble should not be accepted as evidence that the bladder is free. We may know that the bladder is distended when the sense of relief is not complete, when pain is still referred to the pelvis, accompanied by recurrent attacks of irrepressible bearing down or straining efforts, and when a tense swelling has formed in the lower abdomen. When the swelling due to accumulation in the bladder has proceeded to some extent, we may fail to find distinct fluctuation; the tension is too great; but there will be dulness on percussion, extending as high as, or even above, the umbilicus, increase of pain on pressure; and the form of the tumour, if the abdominal walls are thin and yielding, is peculiar. The bladder keeps close to the anterior abdominal wall. It points more under the umbilicus than does the pregnant uterus or an ovarian tumour. Both these spread more laterally, and, of course, have other characteristics peculiar to themselves. The best practical rule to adopt is this:—Whenever hypogastric or pelvic distress points to the expediency of making a vaginal examination, and the vagina is found compressed forwards and the os uteri fixed close behind the symphysis pubis, whilst it is difficult to press in the fingers applied above the pubes on account of the pain produced, or the presence of a swelling, begin by passing the catheter. This will at any rate clear the way, eliminate one source of doubt, and assist the diagnosis. It is a case where a fault of omission is far more likely to be regretted than one of commission.

The quantity of urine retained is sometimes very large; it may amount to two or three quarts, or more. When the retention has lasted twenty-four hours or longer, the urine drawn off will usually be turbid, sometimes smoke-coloured from sanguineous exudation, ammoniacal, and, commonly, extremely offensive. Considerable relief follows the evacuation, but not so complete as might be expected. A low degree of cystitis may have been induced, and the extreme distension to which the bladder has been subjected will leave a degree of paralysis of the muscular coat. Hence the urine is apt to accumulate again, although the obstructing cause may have been removed. Hence the practice of passing the catheter two or three times a day at stated intervals should never be omitted until we get certain knowledge that the bladder has fairly recovered its tone. This is shown by the freedom from local distress, by the consciousness that urine is passed in a stream, and by our finding on passing the catheter that only a moderate quantity of limpid urine is drawn off.

The effects of retention of urine, if not relieved, are:—The bladder, it is said, may burst. This may be looked upon as a possible rather than a probable event. I do not know of a case in which this accident has occurred. Three compensating factors are always at work to obviate bursting. These are: stretching of the bladder, overflow by dribbling, and absorption of part of the urine; and long before bursting could take place the patient would die from exhaustion by pain, by the structural changes produced in the bladder and kidneys, and blood-poisoning. The first effect upon the bladder is irritation, which leads on to congestion, and then to inflammation, of the mucous coat especially. This is the most common cause of *cystitis*. The intense congestion leads to the effusion of blood into the urine. If the interior of the bladder is seen at this stage it looks swollen, pulpy, dark-red, or even black, and viscid mucus mixed with blood may be adhering to the mucous membrane. The swollen mucous membrane entangles the deposits which soon take place, so that it is often coated with triple phosphate. From a moderate degree of congestion and inflammation the bladder may recover; but if the retention be long continued the mucous membrane may be cast off. Several cases of complete exfoliation of the mucous coat are known. This, in itself, is not a fatal accident. Several patients have recovered. One of them I saw at the London Hospital. When it occurs as a consequence of severe labour the duration of the retention need not be very protracted. Twenty-four hours may be enough. But in these cases there is commonly superadded considerable contusion of the bladder from the pressure of the child's head or instruments. But where it results from simple obstruction of the urethra, usually a much longer time has elapsed. Protracted retention after severe labour has in several cases been followed by exfoliation of the mucous membrane. The membrane separates from the bladder in shreds, or as a whole, so that when extruded it represents a perfect cast of the bladder. In one specimen, which came from a woman who had suffered a severe labour, and which was given me by Mr. Nicholson, of Stratford, the substance did not represent the elements of mucous membrane; it was a tough fibrillated tissue coated with phosphatic crystals; it had been drawn out in shreds through a vesico-vaginal fistula, which bore evidence to the difficulty of the labour. But in other cases the true characters of mucous membrane have been distinctly recognised. Dr. Wardell* relates a case which occurred in the infirmary at Tunbridge Wells. A woman was admitted with retention of urine. Fetid urine was drawn off. A fœtus of three to four months was expelled, followed by its placenta. Then incontinence ensued. The urine was still offensive and loaded with mucus. Twelve days later she was seized with great pain over the pubic region. Next morning the house-surgeon was called to see her on account of excessive pain. He felt a substance being expelled, and saw a mass protruding through the meatus urinarius. This was expelled in half an hour. At the moment of expulsion the urine gushed out with great force and in large quantity. Instant relief followed, and she perfectly recovered. The substance looked as if it were the whole mucous coat of the bladder. Its inner surface was coated with gritty deposits. Its minute structure is not described. In this case I have little doubt the cause of the retention was retroversion of the gravid uterus. In other cases the structure of the substance expelled was more clearly made out. Mr. Spencer Wells relates two cases.† A woman, aged twenty-two, had a natural labour with her first child. The bladder was not emptied for sixty-two hours; five pints of turbid bloody urine were then drawn off. Cystitis followed, incontinence of urine, and a train of distressing cerebral symptoms, ending in death two months after delivery. The bladder after death was found to contain a detached cast, lying loose, covered with gritty deposits of urates and phosphates. The walls of the bladder were thick and contracted, the muscular fibres being distinctly visible. The cast resembled degenerate epithelium. On boiling a piece of it in dilute acetic acid much of the saline matter became dissolved and some of the tissue became clear, looking like smooth muscular tissue which has begun to degenerate by the deposit of fatty or albuminous particles in its substance. In Mr. Wells's second case the specimen was expelled six weeks after a severe instrumental labour. From the time of labour the patient suffered from severe cystitis and nephritis. Three weeks after labour the urine contained albumen, blood-corpuscles, pus-cells, chylous matter, and renal tube-casts. The urine, when quite fresh, was loaded with carbonate of ammonia. A hard swelling had been felt through the anterior wall of the vagina, and on the day before the specimen was expelled through the urethra shreds of sloughy membrane had been seen protruding through this canal. After it came away the patient improved, and ultimately got well. Dr. George Harley minutely examined this specimen. It formed a bag, the exterior of which was white, and even to the naked eye distinctly muscular; the fibres were of the involuntary kind, distributed in an interlacing manner, as in the urinary bladder; the interior was of a dark colour, everywhere covered with a gritty deposit, on the removal of which a smooth mucous surface came into view. The possibility of the whole lining membrane of the bladder being exfoliated is proved by a specimen in the College of Surgeons.

* British Medical Journal, 1871.

† Obstetrical Transactions, vols. iii. and iv.

It is the bladder of a man which Mr. Liston had cut into above the pubes to relieve retention, thus allowing urine and a membrane to escape. The specimen exactly resembles the mucous membrane of a bladder separated as a slough in one piece.

Dr. J. J. Phillips relates another case.* A young woman had a difficult labour, lasting, it is said, four days. Bladder distress followed, and a month after labour there was complete incontinence. The meatus urinarius was so dilated that it admitted the tip of the little finger. Next day there was expelled from the bladder a nearly complete cast. The patient recovered.

Dr. Schatz has related (*Archiv für Gynäkologie*) and figured another case of complete exfoliation by necrosis of the inner coat of the bladder consequent upon retention from retroversion of the gravid womb. The woman died, when the lining membrane of the bladder was found lying loose in the cavity of this organ. It is obvious that membrane so detached may fall into the urethra, and thus become a secondary cause of retention of urine.

The recognition of these cases is of great importance. One of Mr. Wells's cases, Dr. Wardell's, Dr. Phillips's, and one which I saw ended in recovery. Where obstruction to the voiding of urine is found from the pressure of some substance blocking the urethra from within, it would not be difficult to give relief by dilating the urethra, and drawing out the substance by forceps or a small blunt hook. Rest, demulcent drinks, and sedatives would diminish irritation whilst a new mucous membrane was forming.

The next effect of retention, and one which very quickly follows, is absorption of some of the fluid collected in the bladder. Then the retrograde pressure upon the ureters and kidneys leads to distension of these parts, and a difficulty of secretion. Congestion of the kidneys easily merges into nephritis; some degree of albuminuria is not uncommon; and the elements which ought to be excreted by the kidney being thrown back into the blood, the circulation is poisoned, and brain symptoms arise. It would be out of place here to discuss the theories that have been broached as to the particular noxious element which thus empoisons the blood. I prefer the term *urinæmia* to uræmia, as more comprehensive, and as less definitely assumptive of a precise knowledge. Blood-poisoning in this way is the most dangerous consequence of retention. It is more frequently the cause of death than any other condition.

Chronic cystitis and *nephritis* is the next consequence of retention. After the retention is relieved, and the bladder has recovered some amount of power, the whole urinary tract is subject to chronic inflammation.

Peritonitis sometimes follows retention of urine. It will, of course, be sometimes difficult to assign this with certainty to the retention as the cause, where great disorder of other pelvic organs which led to the retention coexists. But in some cases there is reason to suspect that, under the enormous pressure exerted by the distension of the bladder, increased by the futile efforts of the organ to expel its contents, some degree of oozing or permeation of the urine may have taken place through the coats, and thus have produced irritation of the peritoneal investment.

Starting, then, with the proposition that retention of urine may be caused by compression of the urethra against the symphysis pubis, we may usefully pursue the subject by inquiring what are the various causes that may exert this injurious compression. It will assist our analysis if we attempt to classify these causes.

We may bring together into groups—

1. Conditions inherent in the uterus itself.

2. Conditions external to the uterus, but acting for the most part by driving the uterus against the bladder. The situation of these is of course behind the uterus. Other conditions have their seat in front of the uterus. Others, again, have a lateral position.

3. Vaginal conditions.

4. Conditions depending upon labour or the puerperal state.

5. Conditions, mostly dependent upon nervous disturbances, which do not fall under any of the preceding heads.

We will now proceed to the more particular discussion of the causes of retention, beginning with the first group of cases.

* British Medical Journal, 1871.

ON THE

HEREDITARY TRANSMISSION OF EFFECTS OF CERTAIN INJURIES TO THE NERVOUS SYSTEM.

BY C. E. BROWN-SÉQUARD, M.D., F.R.S., F.R.C.P.L.

IN a communication I made, in 1870, at Liverpool, to the members of the British Association for the Advancement of Science, I mentioned having witnessed a number of facts showing that alterations of ears or limbs, and certain morbid conditions, had appeared through heredity from parents in which the same alterations or conditions had been brought on by certain injuries to the nervous system. The facts I have observed—some before, others since that meeting—concerning the hereditary transmission to many animals of morbid states caused in one or other of their parents by some injury to the nervous system, can be summed up as follows:—

1st. Appearance of epilepsy in animals born of parents having been rendered epileptic by an injury to the spinal cord.*

2nd. Appearance of epilepsy also in animals born of parents having been rendered epileptic by the section of the sciatic nerve.

3rd. A change in the shape of the ear in animals born of parents in which such a change was the effect of a division of the cervical sympathetic nerve.

4th. Partial closure of the eyelids in animals born of parents in which that state of the eyelids had been caused either by the section of the cervical sympathetic nerve or the removal of the superior cervical ganglion.

5th. Exophthalmia in animals born of parents in which an injury to the restiform body had produced that protrusion of the eyeball. This interesting fact I have witnessed a good many times, and I have seen the transmission of the morbid state of the eye continue through four generations. In these animals, modified by heredity, the two eyes generally protruded, although in the parents usually only one showed exophthalmia, the lesion having been made in most cases only on one of the corpora restiformia.

6th. Hematoma and dry gangrene of the ears in animals born of parents in which these ear-alterations had been caused by an injury to the restiform body near the nib of the calamus.

7th. Absence of two toes out of the three of the hind leg, and sometimes of the three, in animals whose parents had eaten up their hind-leg toes which had become anæsthetic from a section of the sciatic nerve alone, or of that nerve and also of the crural. Sometimes, instead of complete absence of the toes, only a part of one or two or three was missing in the young, although in the parent not only the toes but the whole foot was absent (partly eaten off, partly destroyed by inflammation, ulceration, or gangrene).

8th. Appearance of various morbid states of the skin and hair of the neck and face in animals born of parents having had similar alterations in the same parts, as effects of an injury to the sciatic nerve.

This is the fact I shall dwell upon in this short paper; but before I do so I think it is essential to make some general remarks about the circumstances relating to the various facts above mentioned.

As regards the transmission of epilepsy, it is clear that we must look upon that affection when it appears in the offspring as due to heredity, because in the species of animals (guinea-pigs) in which these facts have been observed I have never seen epilepsy except in those having had certain injuries able to produce that nervous complaint, or in the young born of these injured and thereby epileptic animals. My watching over guinea-pigs has been on such a scale (at one time, before the siege of Paris, I had 584 in my laboratory) that I can say I have had many and many thousands under observation from 1843 till now—a period of more than thirty years.

Of the various kinds of hereditary transmission I have mentioned, only two are very frequent—exophthalmia and

* This fact I discovered long ago. (See the Proceedings of the Royal Society, June, 1860, vol. x., p. 297.)

the change in shape of the ear. The absence of toes is rare. Since I have paid attention to it as an instance of hereditary transmission I have only recorded it thirteen times, although I know that I have seen it in more than thirteen animals. I have come to the conclusion that this condition of the foot deprived of toes is due to heredity from this reason, that I have never seen a guinea-pig born toeless which was not the offspring of parents accidentally deprived of toes. Besides, the congenital absence of toes has never existed but in the hind legs, limbs which were also the only toeless ones in the parents. I should say, however, that in two animals both hind legs were partly toeless, while the father in one case, and the mother in the other, had toes missing only in one of the hind legs. A similar observation I have made, and already mentioned, as regards the protrusion of the eyeballs; a number of animals had both eyes protruding, although their parents had exophthalmia only on one side.

In most of the instances of heredity that I have observed only one of the parents had been operated upon, and had the alteration which was transmitted.

I now come to the fact to which I wish especially to call attention. I have made the following observations only in two animals, but in both of them all the features I will mention were perfectly manifest.

I have already stated that the young of guinea-pigs born of parents having had a section of the sciatic nerve sometimes become epileptic. This inherited epilepsy I have never observed in other animals than those which had also inherited an absence of toes. Now, as regards these toeless animals, I have been able in two of them, as already stated, to follow up the changes I will mention.

It is pretty well known that I have found that some time after the section of the sciatic nerve in guinea-pigs the sensibility of the skin of some parts of the face and neck on the side of the operation becomes very different from what it was; it diminishes as regards its power of giving rise to pain under a prick, a pinch, or a galvanic current, at the same time that appears in that skin the power, when tickled or gently pinched, to produce some convulsive reflex movement. At first there is only a reflex spasm of some muscles of the face and neck; gradually the number of muscles contracting and the energy of the spasm increase, and after a few days the whole side of the body on which the nerve has been divided contracts powerfully. A little later the muscles of the other side become also convulsed, and the head is shaken to and fro from side to side. A few days later the attack becomes more complete. Not only the convulsions are more easily produced and become more violent, but also there is sometimes loss of consciousness and a state of torpor, stupidity, and even in a few instances of insanity, for a while after the attack. In the meanwhile the divided ends of the sciatic nerve begin to unite, and when reunion progresses, three very remarkable facts can be witnessed. The skin of the face and neck recover gradually their sensibility to mechanical or galvanic irritation, the fits gradually diminish in intensity, the changes for the better occurring just by opposite steps to those followed while the trouble was increasing, and we find also that the hair gradually falls off from the cutaneous zone, the excitation of which by tickling or gentle pinching was able to give rise to an epileptic attack. The beginning of this fall of hair marks the turning-point of the nervous affection. As soon as it appears, a decrease of violence of the convulsive complaint begins to be noticed.

Now all these peculiarities—the gradual increase of the affection, the diminution of sensibility in the *epileptogenous* zone, the coming of a period of complete attacks of epilepsy, and then the loss of hair, and the gradual diminution of the nervous complaint—all these things in all their details I have witnessed also in two guinea-pigs born toeless by heredity, and having also by heredity become epileptic.

There is therefore an inheritance not only of an aptitude of being seized with convulsions, but of the whole nervous affection of the father or mother in all its features, from beginning to end, and in the same order. This certainly is quite remarkable, but what is still more so is that in the parent there are changes which we know to occur in the sciatic nerve, which we find to be connected with the different stages of the convulsive affection, and especially there is the co-existence of the reunion of the divided nerve and of the amelioration at the time of the fall of hair; while in the toeless-born animals there is no division of the sciatic nerve to give rise to the trouble, and still less a reunion of separated ends of nerve to explain the amelioration. We must conclude therefore that the sciatic nerve in the congenitally toeless animal has inherited the power of passing through all the different morbid states which have occurred in one of its parents in the central end of the sciatic nerve from the time of the division till after its reunion with the peripheric end. It is not therefore simply the power of performing an action which is inherited, but the power of performing the whole of a series of actions, and in a certain order.

In almost all, if not in all, the cases of hereditary transmission I have observed in animals in whose parents I had injured either the sciatic nerve, the cervical sympathetic nerve, or the corpus restiformis, most likely what is transmitted is the morbid state of the nervous system. There is possibly an exception in the fact that some animals were born toeless from their parents having lost their toes; but the other facts only imply the transmission of a morbid state of the sympathetic or sciatic nerve or of a part of the medulla oblongata.

These facts, added to many others mentioned by P. Lucas* and by Charles Darwin,† clearly prove the possibility of hereditary transmission of effects of mere accidental injuries.

ON CERTAIN POINTS RELATING TO THE ETIOLOGY, PATHOLOGY, AND TREATMENT OF DIPHTHERIA.‡

BY GEORGE JOHNSON, M.D., F.R.S.,

PROFESSOR OF MEDICINE IN KING'S COLLEGE, SENIOR PHYSICIAN TO KING'S COLLEGE HOSPITAL.

I PROPOSE in the present communication to discuss some important practical questions relating to the etiology, the pathology, and the treatment of diphtheria.

There are some practitioners who, believing that diphtheria is a specific contagious disease, maintain that defective drainage and filth have little or no influence in its causation, while others, denying its contagiousness, assert that its origin and spread may always be explained by insanitary conditions. I believe that both classes of negationists are in error. I have no doubt that the disease, though not highly contagious, is communicable from the sick to the healthy, and I have as little doubt that it is often caused by filthy emanations from sewers and cesspools, and this, too, when it is in the highest degree improbable that any specific poison can have been introduced from without into the decomposing stuff that has excited the disease. In proof of the contagiousness of diphtheria, the following, amongst a multitude of similar cases, may be set forth.

M. Valleix, a colleague of Trousseau, while examining the throat of a patient, received into his mouth a small quantity of saliva spurted out by the patient in coughing. Next day, on one of his tonsils there was a pellicular deposit, and some hours later both tonsils and the uvula were covered by false membrane; the disease made rapid progress, and in forty-eight hours he died. Another of Trousseau's provincial colleagues was performing tracheotomy in a case of diphtheritic croup, when he applied his mouth to the wound to suck blood from the trachea. He thus inoculated himself, and died in forty-eight hours.§

Sir William Jenner states that Dr. E—— lived in Euston-road. He was attending a child ill from diphtheria, when he sickened with the same disease. As he recovered his attendant was attacked with it. No one in his house suffered except Dr. E—— and the young woman who was in constant attendance upon him. The child from whom

* Traité Philosoph. et Physiol. de l'Hérédité Naturelle. Paris, 1850. Two vols. 8vo.

† The Variation of Animals and Plants under Domestication. London, 1868. Two vols. 8vo.

‡ Read before the West Kent Medico-Chirurgical Society, Dec. 4th, 1874.

§ Trousseau's Clinical Medicine, New Sydenham Society, vol. ii., p. 497.

Dr. E—— appeared to have caught the disease resided some distance from Euston-road.*

Mr. Simon's second report to the Privy Council contains the following piece of evidence:—"No case (says Mr. Eastes) of diphtheria had ever been seen in Folkestone during my time, until Isabella W——, aged four and three quarter years, arrived from Boulogne on the evening of July 2nd, 1856, being then in an advanced stage of the disease. She died on the following day. On July 6th, Catherine W——, her sister, aged ten, was attacked. But she had never been in France; she had always resided on the East Cliff, Folkestone, in the same house to which her dying sister was brought four days previously. One other case occurred in the same house three days after, and they all terminated fatally."

In the same report Dr. Rumsey, of Cheltenham, states that "a schoolboy convalescing from diphtheria contracted by him at Swansea, where it was epidemic, and arriving at home in an open healthy suburb of Cheltenham, where at the time there was no diphtheria, was received and embraced by one of his two sisters. On the fourteenth day afterwards she was attacked by diphtheria, and suffered severely. Her sister, who did not meet her brother, helped to nurse her, and was attacked fourteen days after the first sister by the same specific disease."

Trousseau gives a case of direct inoculation of the mother's nipple by a diphtheritic sucking infant. The nipple became covered by false membrane, but the disease was arrested by appropriate treatment.

I have to thank Dr. Dewes, of Coventry, for the following brief statement of very instructive facts:—The younger of two brothers, a boy named Arthur, was taken ill at home with scarlet fever on the 8th of November. As his mother was expecting her confinement he was sent to a cottage on the outskirts of the town, where he had a severe attack, with a copious eruption and diphtheritic exudation on his fauces, but not in his larynx. Meanwhile the elder brother, Alfred, was taken ill at school on the 16th of November. Both boys had attended the same day-school; and at the same time some of the other boys were ill at home with scarlet fever. As the schoolmistress was a relation of the boys, it was arranged that the school should be dispersed and the boy nursed there. He had scarlatina anginosa, but no diphtheritic exudation, and he became convalescent about the 25th of November. On the 5th of December the man at whose cottage Arthur was staying sickened with scarlet fever, and he, like the boy, had also a diphtheritic throat. It now became necessary to remove the boy from the cottage, which was done on Dec. 6th or 7th. As the two brothers had been convalescent for a fortnight they were both allowed to occupy the same room at the school-house, and, although separate beds were provided for them, they soon got into the same bed. They were not allowed to leave the bed, and all went on well until the 18th of Dec., when Alfred was observed to have a croupy cough, with bronchial râles throughout the chest. On the following day he was much worse, the croup and the bronchitis hourly increased in severity, there was a diphtheritic exudation on the tonsils and uvula, and he died on the third day from the onset of the croupy symptoms. In neither case was the urine albuminous at any period of the illness. The most probable explanation of these facts appears to be that at the cottage where the first boy, Arthur, was nursed there was some sanitary defect which caused the scarlet fever to be complicated with diphtheria. The result of bringing the two boys together was that Alfred caught a fatal diphtheria from his convalescent brother.

The following case came under my own personal observation. In May, 1867, a gentleman living in one of the largest houses in Westbourne-terrace was under my care for diphtheria. During his illness, a gentleman from the country, who was staying in the house, spent much time in the patient's room, and helped to nurse him. When the patient was convalescent his country friend sickened with what proved to be a severe attack of diphtheria, from which he recovered at his country house.

The following history I received from the father of the children referred to. About four years ago a girl, aged fifteen, was sent home to a large house in an open park in Hertfordshire, after having been ill for ten days at a school at Brighton. It was noticed that for some days after her arrival she had a discharge from the nostrils. As no warning was given that she had been suffering from an infectious disease, she was allowed to associate with her seven brothers and sisters. After she had been about a week at home, the schoolmistress wrote to say that she felt anxious to hear of her pupil, as there had been some cases of diphtheria at the school. In about another week a sister aged ten, and a brother aged four, were seized within a day or two of each other with symptoms of diphtheria, and in a few days they both died. The children were isolated as soon as they sickened, and no other case occurred. In this case there can, I suppose, be no doubt that the young lady when she arrived at home was suffering from nasal diphtheria, and she thus became the vehicle of a fatal infection to her brother and sister.

I believe that all the cases which I have here cited are examples of the diphtheritic infection being conveyed either through the air or more directly by the actual contact of the morbid secretions with the tissues of the recipient.

To oppose to positive evidence of this kind such negative statements as that in numberless instances medical attendants and nurses have come into close contact with diphtheritic patients without taking the disease, appears to me a vain and frivolous objection. Diphtheria is not a highly contagious disease. In the scale of infectiousness it stands far below scarlet fever, for instance, and there is reason to believe that the susceptibility to the disease differs almost infinitely in different persons; but a medical attendant who entirely ignores the contagiousness of the malady is likely to neglect reasonable and necessary precautions to protect himself and others from the risk of infection.

When a case of diphtheria occurs in a house without evidence of importation from without, still more when several cases occur together or in quick succession, there will be good reason to suspect that sewers, cesspools, or contaminated water may be the source of the disease. My belief is that in a very large proportion of cases there is as close a relation between diphtheria and insanitary conditions as exists between typhoid fever and similar insanitary conditions; and I scarcely need say that if this be so the general recognition of the fact is of the greatest importance with reference to the adoption of preventive measures. There is reason to believe that much more harm would result from ignorance of the filth origin of diphtheria than from practically ignoring its infectiousness.

Many instances have come to my knowledge in which fetid fæcal emanations have appeared to be the direct cause of diphtheria. I will refer to a few of these.

The first cases of diphtheria that I remember to have seen occurred in the persons of two children of a village tradesman in Kent, in October, 1855. They were both taken ill simultaneously; one, a girl, aged nine and a half years, got laryngeal symptoms and died; her sister, aged six years, got a diphtheritic patch on one tonsil, and was quickly well. Another sister, aged seven, had died on the 1st May previously, after a week's illness, in which sickness, sore-throat, and a very offensive discharge from the nose were the chief symptoms. No other cases had occurred in the village up to this time. The house stood by itself in a garden; there was no drainage. From what I have since seen of diphtheria, I have no doubt that the cause of the disease in these three children was the effluvium from a copious and most offensive fæculent accumulation beneath a common open privy in the garden, to which the whole household resorted.

In January, 1872, I saw with my friend Mr. Bateman, of Richmond, a lady, Mrs. B——, who was suffering from a diphtheritic throat. Mr. Bateman has kindly sent me the following note of the circumstances:—"The lady you saw with me at Ham was one of a family consisting of herself, her husband, four children, and three servants. The house is drained into a cesspool about twenty yards distant. The accumulation of many months was emptied one day while the wind was blowing towards the house from the cesspool, and a very offensive smell reached the house. Three days afterwards all the four children became feverish and complained of sore-throat; the tonsils were seen to be inflamed and covered with yellowish-white patches. In a few days two of the servants were attacked, one rather severely; and, lastly, Mrs. B——, the lady you saw with me. Her tonsils

* Diphtheria, its Symptoms and Treatment, p. 52. 1861.

were inflamed and covered by false membrane. The only members of the family who escaped were Mr. B——, the husband, who was away from home all day, and one servant." All the patients recovered.

When Mr. Bateman wrote me the history which I have just read, he went on to say, "I have been called lately to a similar set of cases. The family consisted of the father and mother, seven children, and three servants. On going up the garden to the house my nose was assailed by a horrible stink, and, seeing some men at work close to the house, I stopped to see what they were doing. I found that they had ripped open a drain running in front of the house within ten yards of it, and they had opened a cesspool into which the drain flowed. I found the mother, five of the children, and two of the servants suffering from sore-throat identical with the Ham cases." In the same letter he says, "I am at the present time (January, 1874) attending at another house where a young lady and the parlour-maid are suffering from severe sore-throat with the usual patches. A cesspool had been opened a few days before quite close to the house. I feel quite certain that all these cases were caused by the sewage filth, and in particular by that portion of it which, floating in the atmosphere, was respired by the persons affected."

I am indebted to my friend Dr. Casey, of Windsor, for the instructive particulars of a succession of cases of diphtheria in a family at the village of S—— from Nov., 1872, to May, 1873. "The family consisted of father, mother, and nine children, aged from twelve to one and a half. The house is detached, and out of the village. There were no cases in the immediate neighbourhood, though the disease occurs there with, I think, more than average frequency. During November, 1872, two of the children (Nos. 6 and 7) passed through attacks of diphtheria of moderate severity. A week or so after their seizure (Nov. 24th) their mother, who was nursing them, was attacked by the disease in an almost malignant form, and died on Dec. 1st. After some days the five elder children were sent away, and some steps were taken to repair drains and disinfect. Six weeks after (Jan. 15th, 1873) the baby and a servant fell ill, and the former died (Jan. 23rd). Then the three children remaining in the house (two of them convalescents) were sent away. The house was now most energetically disinfected, and drains examined. After the lapse of ten weeks all the children returned (April 9th). A week after their return their uncle visited them, slept in the house two nights (April 15th, 16th—17th), and returned home on the evening of the 17th. During his journey home to Worcester he felt unwell, was worse, restless and sleepless during the night, next day decidedly ill, and on the morning after that (19th) a patch of diphtheria was recognised. The attack which followed was a mild one. Six days after the uncle's visit (April 22nd) the youngest child showed the disease. This child had remained in the infected house until the second outbreak (January), and had since that been away with the two convalescents. The children were again removed; Nos. 1 and 4 to one house, and the rest (Nos. 2, 3, and 5) to another. But of the latter, two more (Nos. 2 and 3) were attacked in a few days (April 25th) in succession; and more than a fortnight after removal from home, yet another child (No. 5) fell ill (May 11th). This was the last and tenth case, two only of the children (Nos. 1 and 4) having escaped. And now, at last, the foul remains of a disused cesspool were found under the floor of the drawing-room, which room, I may add, had from the first been suspected of bad smell. After that had been remedied all the family shortly returned, and have continued well. The last case must, seemingly, be ascribed to *personal* contagion, for it occurred after the child had been for more than a fortnight away from the original source of infection, and in a presumably healthy farm-house. On the other hand, the uncle's attack was almost certainly owing to *endemic* infection, for the lapse of time (ten weeks) and the vigorous measures adopted to purify the house (which was, when he slept in it, still bare of carpets and papers) renders the supposition that contagious matter from the previous cases lingered in the house and furniture improbable."

It appears to me to be a matter of almost absolute certainty that the foul cesspool was the primary source of all these cases. It is possible, and not unlikely, that the mother may have caught the disease from the two children who were the first sufferers; and it is still more probable, as Dr. Casey suggests, that the last case, which occurred a fortnight after the removal from the pestilential house, was the result of contagion from the other children at the farm-house. It is well to note that not only was the house detached, but the cesspool had long been disused. It appears therefore scarcely possible that a specific diphtheritic poison could have got into the cesspool from without: the poison must have been compounded within the precincts of that foul receptacle. Some time since I told the story which I have just now read to a medical officer of health, and he expressed his belief that the cesspool had nothing whatever to do with the diphtheria! His incredulity affords a good illustration of the very different impression which is produced upon different minds by the same evidence.

My friend Mr. Salter, of Tollesbunt D'Arcy, in Essex, who has had a large experience of diphtheria, writes to me that he has "had unquestionably a great many cases of diphtheria, whose origin can be distinctly traced to sewage poison, either gaseous or liquid," and he gives me some particulars of an outbreak in one family, four children and a nurse having been attacked in quick succession, which he attributes to the percolation of sewage into the well which supplied the family with water.

I look upon the occurrence of an indigenous case of diphtheria in a house as an indication of the necessity for a most rigid inquiry into the condition of the drainage and the water-supply. At the beginning of the present year a gentleman living in one of the best houses in Queen's-gate asked me to see his butler, whom I found suffering from a severe attack of diphtheria. The basement of the house looked the perfection of cleanliness, but I advised that a sanitary engineer should be called in to inspect the premises. The result was the discovery of an untrapped sink-pipe near the butler's sleeping-room.

It is notorious that in the houses of some of the most exalted and wealthy, and in open country districts, the sanitary defects which originate such diseases as diphtheria and typhoid fever are almost as common as in the meanest cottages and in the most crowded cities; but it is obvious that overcrowding in the small rooms and cottages inhabited by the lower classes must greatly increase the danger arising from other insanitary conditions.

In opposition to the doctrine which I am now advocating, it is sometimes stated with perfect truth that diphtheria never visits some houses which are dirty within and without, and which are surrounded by every form of abominable filth. The reply to this is, that no one believes that any and every kind of foul emanation from decomposing organic matter will suffice to cause diphtheria. As every black powder containing charcoal is not the explosive compound which we call gunpowder, so every fetid gas escaping from a drain or a cesspool is not laden with the perilous stuff which will excite diphtheria. We believe that a combination of conditions, local and atmospheric, is required to generate or develop the morbid poison, and the absence of any one of these may prevent its formation. I learn from Mr. Salter that on several occasions, after his district has been free from the disease for many months, he has "suddenly been called to three or four cases in *one day*, at distances of ten or twelve miles apart." Such an occurrence can be explained only by the theory of some widely diffused atmospheric influence concurring probably with local insanitary conditions. Mr. Salter tells me that although he has "had cases occurring in every month of the year, July, August, and September seem to be the months chiefly preferred by the disease." These are the months during which, in consequence of the high temperature, the decomposition of organic matters would generally be most active. The analogy of other diseases renders it probable that besides temperature there are other climatic conditions which favour the occurrence of diphtheria at one season rather than another.

(To be concluded.)

PROF. LEVI, of the University of Pisa, has just made known as the result of numerous analytical and experimental researches, that the physiological, therapeutical, and obstetric properties of ergot of rye are due to the presence of phosphoric acid, which it contains in abundance, much more than to its organic principles (like ergotin, ecbalin, &c.), to which until now had been exclusively ascribed all the various actions of the substance.

NON NITROGENOUS DIET IN DISEASE.

BY SURGEON EDWARD L. MOSS, M.D., R.N.,
SURGEON IN CHARGE, ROYAL NAVAL HOSPITAL, ESQUIMALT.

(*Communicated by the* DIRECTOR GENERAL OF THE MEDICAL DEPARTMENT OF THE NAVY.)

THE experiments of Lehmann demonstrated the effects which a strictly non-nitrogenous diet produces in the urinary excretion. And recently Dr. Parkes (who quotes Mr. Mahomed) has shown how powerfully such a diet controls the amount of free acid, and has pointed out its probable therapeutic value in reducing both cardiac action and the acidity of the urine.

I have not heard that the non-nitrogenous system has yet been applied to the actual treatment of disease, but I have little doubt that experience on the subject is already accumulating, and that others will find their results corroborated in the following notes.

In this country (Vancouver's Island), where every sort of meteorological condition is to be found within a few miles, or a few days, treatment of chronic rheumatism produces at best but temporary benefit. I have recently had under my care a case of this sort, in which the free acidity of the urine was, as usual, very greatly increased. The maxima of acidity were moreover synchronous, with exacerbations of the pains and dyspepsia. I had tried all the usual plans of treatment, and both the patient and myself were weary with failures. I therefore determined to find out whether a non-saline and non-nitrogenous diet, which could reduce the great acid excretion, would have any corresponding effect on the other symptoms.

At first sight it might be assumed that a diet of oil, starch, and sugar, would, by the lactic fermentation of the two latter, exaggerate a disease known to be associated with an increase of lactates. But lactic fermentation depends for its origin on the katalytic action of decomposing nitrogenous substances, such as may occur in the imperfect digestion of ordinary food. Therefore, if rheumatism, like scurvy, could be cured by diet, the non-nitrogenous plan is rational enough. My reason for trying it—as stated above—was, however, quite independent of any such chemical theorising. I may at once say that the diet did not cure the rheumatism, though it permanently removed some of the accompanying symptoms; nevertheless the results are noticeable as confirming those mentioned above, especially as the diet was persevered in for a longer period than in any cases I have seen recorded.

The following may be taken as an index of the patient's condition during the week previous to the commencement of the treatment:—Average axillary temperature, 99·4°; pulse (lying) 92, weight 129lb.; digestion slow and imperfect, accompanied by feelings of distension and acid eructations. Bowels irregular, diarrhœa and constipation alternating. Total quantity of urine in twenty-four hours, 38oz.; its specific gravity 1016; and free acidity, expressed according to Vogel's plan in grammes of oxalic acid, 1017. This amount of acidity was so much greater than I expected to find, that I at first attributed it to such acid fermentation as might take place in various portions passed within the twenty-four hours, but estimations made immediately after micturition gave a very similar result. The normal free acidity, according to A. Winter, is equal to 2·3 grammes oxalic acid.

The diet adopted was that given by Dr. Parkes, with the addition of a tapioca pudding, without milk or eggs. It consisted of arrowroot cakes made with butter, melted and poured off from its curds. Some cakes were made with sugar, some without, and arrowroot porridge with treacle. After a trial of three days the man complained of the monotony of this regimen, and a glass of weak gin-and-water was added to the scale, as I could not be certain of his strict adherence to it, if he was dissatisfied, and the addition, though unlikely to aid the reduction of acidity, would not interfere with the character of the diet.

After careful adherence to non-nitrogenous and non-saline diet for seven days, his axillary temperature—mean of morning and evening observation—was 99°; pulse, 79; weight, 125 lb. Total quantity of urine, 40 oz.; specific gravity, 1009; it was still acid, but after four careful estimations its free acidity was found to be reduced to equal to 1·77 grammes of oxalic acid. If Haughton's tables can be trusted under such abnormal diet, the daily quantity of urea was reduced by 86 grs.

Notwithstanding the loss of body weight, the patient found himself much improved. He felt physically stronger. The dyspepsia had disappeared; the bowels acted regularly, and the stools had become normal, instead of being fluid and bilious as previously. The rheumatic pains had lessened, but as the week was one of exceptionally fair and steady weather, I could not attribute the reduction to treatment alone.

Hoping to retain the advance thus gained, by avoiding a sudden return to ordinary diet, a modified scale was persevered in for two weeks longer. Rice was substituted for the tapioca, and an ounce and a half of meat, with a cup of tea, milk and sugar, given at breakfast, and two ounces of meat with a potato at dinner-time.

After a week of this modified diet, the temperature was 99·7°; pulse, 88. Total quantity of urine in 24 hours, 40 oz.; specific gravity, 1006; free acidity equal to 5·74 grammes of oxalic acid; body weight, 125½ lb. There were no indications of a return of the dyspepsia. The pains were worse. The last three days of the week were moist and variable, with heavy rain at night.

At the close of the second week of the same diet the temperature was 99·3°; pulse, 85; total quantity of urine, 37 oz.; specific gravity, 1018; free acidity expressed as before, 8·35; body weight, 127 lb. No dyspepsia; pains were less than in the preceding week, but were no better than when the diet treatment was commenced.

It is now two months since the dietetic course was discontinued, and I believe its good effects are more evident than they were at first. The dyspepsia, with its accompanying distension and alvine irregularity, has never returned. The ankles and knees, though still stiff with exudations, have never shown the sudden swellings and pains of active rheumatism. And, in spite of the broken weather of autumn, the pains are greatly reduced.

In addition to the minor effects of this diet in reducing temperature and pulse, and increasing the daily amount of urine, its powerful restraint on the formation of acid is clear enough.

It is also plain that a man can support his physical strength for at least a week on a diet which a few years ago would have been condemned as destitute of the element of nutrition.

CASE OF

SUPPURATIVE INFLAMMATION OF MASTOID CELLS WITHOUT AFFECTION OF TYMPANUM.

BY F. M. PIERCE, M.D., L.R.C.P. LOND.,
HONORARY MEDICAL OFFICER TO THE MANCHESTER EAR INSTITUTION.

INFLAMMATION of the mucous membrane of the tympanum, with purulent discharge from the external meatus, is common enough, as also suppurative affections of the mastoid cells, but the occurrence of a suppurative inflammation of the mastoid cells without any extension to, or implication of, the tympanic cavity and membrana tympani, is of great rarity, and the following case is deserving of record.

J. B——, aged twenty-two, mechanic, was admitted into the Manchester Ear Institution Oct. 30th, 1874. Had always enjoyed good health until two months since, when he had repeated "colds," with slight pain in both ears, which he neglected, until three days ago he was attacked with severe pain over the right mastoid and down the neck. The mastoid process became very red, swollen, and œdematous, with sharp stabbing pain in the ear, especially at night. He looked pale and careworn, and the inflamed, swollen state of the mastoid caused the auricle to project greatly from the side of the head. The hearing distance for watch on right side was $\frac{2}{24}$ in. (the left side was not affected); the tuning-fork on vertex heard best in the right ear. The right external meatus was dry, but normal in colour; the membrana tympani was sunken, irregularly marked with slight radiating opacities, the light spot small, round, and dull; the manubrium of the malleus and processus brevis prominent and pale; the Eustachian tube pervious. Constant tinnitus and slight pharyngitis were also present. There was no discharge from the external meatus, nor any signs of secretion within the tympanum, though the patient

fancied there had been slight moisture in the meatus one day, probably due to the warm remedies introduced, such as onions, &c. An incision was made in the mastoid half an inch behind and parallel to the attachment of the auricle; four leeches were placed in front of the trajus, and a warm water douche every hour to the meatus.

The incision was enlarged next day and poulticed, after which a large quantity of pus came away, and a probe could be passed through soft yielding structures downwards and slightly inwards and backwards to the position of the mastoid cells. The external meatus and membrana tympani were repeatedly examined without any alteration being found.

Tonics, &c., were ordered, and on Nov. 27th all swelling, pain, and discharge from the mastoid had ceased, and the patient felt almost well.

On making a last examination through the speculum of the condition of the membrana and cavitas tympani, no discharge or affection of those parts had occurred, the membrane being intact, fairly translucent, and free from any signs of congestion. There was no bulging at any point of its surface. No symptoms of any cerebral complications were observed at any time during the attack.

Few authorities make any reference to cases like the above, and only some of the most recent writers have noticed the exact condition of the mastoid process and tympanum in acute suppurative inflammation of the former. Cramer, Toynbee, Wilde, Gruber, and Hinton do not mention the condition. Dr. Roosa says: "A primary inflammation of the mastoid cells or their lining membrane, or of the periosteum in this region, is very rare, as is a middle-ear inflammation in which the mastoid becomes involved without suppuration in the cavity of the tympanum." Dr. Roosa mentions having seen only one case. Allen says: "It seems doubtful whether the mastoid cells are ever primarily affected, and without contemporaneous disease of the tympanic cavity; and perhaps the only exception which can be allowed in respect of an idiopathic affection in which the tympanum is not involved (or does not appear to be involved) is when certain fatty, chalky, scrofulous, or other deposits occur in the mastoid cells, and are not at the same time found in the tympanum."

Two or three cases are reported in various publications, but without sufficient detail to make them thoroughly comparable with the present one.

Without offering a theory to explain the existence and origin of this morbid state, I may add that past mischief in the left ear rendered the information to be obtained from the tuning-fork less reliable than usual.

Manchester.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

ANEURISM OF THE FEMORAL ARTERY.

(Under the care of Mr. BRYANT.)

THE following case continues the series, which we commenced some time ago, illustrating some points in the surgery of the arteries. The subjoined case is interesting as showing the value of ligature of the external iliac artery for aneurism of the common femoral. Unfortunately compression cannot be properly applied in such cases, partly on account of the proximity of the aneurism to the only point at which pressure can be applied, and partly because the arterial wall at this point is likely to be diseased.

For the notes of the case we are indebted to Mr. G. Mackern.

Femoral aneurism; failure of compression; ligature of the external iliac artery; cure.—Samuel L——, a labourer, aged forty-five, was admitted Jan. 29th, with aneurism of the right femoral artery. The family history was good, and the patient had always been a healthy man, never having suffered from any disease or injury. For many years he had been engaged in heavy work, such as digging for foundations and for making sewers. About a year before admission he first noticed a small swelling, about the size of a shilling, at the upper and front part of the right thigh. This swelling gradually enlarged for about eleven months, after which it began to increase in size more rapidly. Notwithstanding this, the patient continued his occupation. On Jan. 24th the swelling suddenly became much larger, but the patient followed his employment till the morning of the 27th, when he was obliged to give up work, owing to great pain and a tearing sensation at the seat of the tumour.

On admission there was a tumour occupying the lower two-thirds of Scarpa's triangle, filling a space 5 in. by 3½ in., its summit being about 2½ in. above the level of the thigh. The swelling was conical in shape, and there was a distinct knot or boss on the apex, which was directed upwards and inwards. There was a distinct expansile pulsation of a forcible character extending from above downwards. There was an extension of the tumour upwards under Poupart's ligament, and downwards and inwards along the course of the femoral artery. The tumour felt solid throughout its surface, slightly irregular, but the colour of the skin over it was not changed. Pressure, by means of a weight, on the external iliac was commenced at 2.30 P.M., and kept up for nine hours uninterruptedly, when the tumour appeared rounder and a little harder.

Jan. 30th.—The patient slept well after the weight was taken off at 11 P.M. the previous night. Pressure was again applied at 9 A.M., and after four hours' continued pressure the pulsation remained the same, and the tumour was not sensibly altered. It was, therefore, deemed advisable to ligature the external iliac artery. Accordingly, at 1.30 P.M. the patient was put under the influence of chloroform, and Mr. Bryant cut down on the external iliac artery just above Poupart's ligament, making an incision two inches long parallel to the ligament, through the skin and through the external oblique muscle; then detaching about a quarter of an inch of internal oblique muscle, and a little of the transversalis muscle from Poupart's ligament. The transversalis fascia was then torn through with the finger, the peritoneum lifted up, and the artery exposed. An aneurism needle was then easily passed round the vessel, which was tied with a carbolised catgut ligature. Pulsation immediately stopped in the aneurismal sac when the ligature was tightened. The wound was secured by three interrupted sutures, and supported by strapping, over which a pad of cotton-wool was placed. The whole limb was then encased in cotton-wool, and the patient placed in bed. Evening temperature 100·2°, pulse 98.

Feb. 1st.—No distension of abdomen. The wound has healed by first intention through two-thirds of its extent; discharge comes from upper part of incision. A systolic bruit can be distinctly heard at the apex of the heart. Morning temperature 99·8°, pulse 70; evening temperature 99·2°, pulse 68.

2nd.—The limb is comfortable and warm; no pulsation in sac or at inner ankle. Temperature 98·2°; pulse 62.

15th.—Wound healthy; no pain in the abdomen. Bowels confined. Tongue pale and moist. Shivering at 8.30 A.M.; at 5.30 had a sudden pain in left chest, extending from outside the nipple upwards and inwards to the sternum. Morning temperature 102·8°; pulse 96. Ordered a dose of castor oil, with five drops of laudanum, to be taken at once, and a mixture of quinine and morphia to be taken every four hours. Evening temperature 100·6°; pulse 90. Sweating. Bowels open three times.

16th.—Morning temperature 99·5°, pulse 84; evening temperature 101·2°, pulse 84.

24th.—Temperature 98·8°. Wound very nearly healed. The sac is very soft and somewhat smaller. Appetite good; bowels open.

March 3rd.—Wound almost completely closed. Sac getting smaller.

20th.—Tumour much harder. No pulsation in the posterior tibial artery.

April 10th.—Patient still in bed; general health good. Wound completely healed.

23rd.—Patient up; allowed to sit on a chair with his leg up.

May 2nd.—The patient gets about the ward now on a wheeled chair. Is not allowed to walk. No pulsation can be felt in either the anterior or the posterior tibial artery.

14th.—Discharged cured. To use crutches for a few weeks.

ST. GEORGE'S HOSPITAL.

CASE OF ACUTE ALCOHOLIC POISONING.

(Under the care of Dr. WADHAM.)

ON Nov. 26th, W. C——, aged twenty-one, was brought to the hospital with the following history. At 11 A.M. of the same day he happened to be present when another man carrying three jars, containing brandy, whisky, and rum, through the street, met with an accident, and spilt their contents in the gutter. On seeing this, he dropped on his hands and knees and drank a quantity of spirit out of the gutter. About five minutes afterwards he was noticed to stagger as he walked down the street, but it was not known what happened to him between this time and 12 o'clock, when he was brought insensible to his lodgings. His landlady having sent for the police, and they for a surgeon, he was, by the advice of the latter, brought to the hospital at 2 P.M.

On admission he was perfectly comatose, his face somewhat bloated and livid, and frothy mucus was oozing from his mouth and nostrils; his skin was cold and clammy, his pulse fluttering, the breathing short and stertorous, and the pupils unequal and inactive.

By means of the stomach-pump sufficient spirit to make more than a gallon of strong brandy-and-water was withdrawn. Respiration having nearly ceased, he was galvanised in the course of the phrenic, and bottles of hot water were applied to his feet and placed round his body; by these means his breathing became better, his pulse fuller, and the congestion of the face ceased, but whenever the galvanism was omitted for a few minutes the respiration stopped. This galvanism was continued until 3.10 P.M., after which he continued breathing of his own accord, and some urine drawn off at this time smelt strongly of brandy, and contained a considerable amount of albumen. At 5.30 P.M. respiration again ceased, but recommenced under the influence of galvanism. Between this and midnight his breathing was generally stertorous, and mucous râles could be heard all over the chest, the respiratory movements varied from 40 to 60 in the minute, and his pulse was 120.

At 5.30 A.M. of the 27th, he had turned himself in bed, and showed some slight consciousness when attempts were made to rouse him. His pupils acted slightly, but his breathing continued stertorous, his respiration 64, and his pulse 120 in the minute. He continued in the same condition until 7 A.M., and then died somewhat suddenly, exactly 19 hours after drinking the spirit.

At the post-mortem examination the stomach was found slightly congested at its cardiac extremity. The lungs were intensely congested, and the bronchial tubes congested and filled with sanious fluid. There was merely slight congestion of the membranes of the brain, the ventricles were perfectly dry and the substance of the brain natural in appearance. The other organs were congested, but otherwise healthy.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

WOUND OF THE OPTIC NERVE FROM A STAB WITH A KNIFE WITHOUT INJURY TO THE GLOBE.

(Under the care of Mr. GEO. LAWSON.)

THE following very rare and curious accident came under the care of Mr. Lawson in July, 1874:—

A young man, aged twenty-seven, was engaged in a street fight, when his opponent struck at his head with a clasp-knife. The blade penetrated the rim of the wide-awake hat he was wearing, passed through the upper eyelid, close to the upper edge of the orbit, and onwards to the optic nerve, which it wounded, but without touching the globe. The man declared that he was instantly blinded. He was positive that he could see well with the eye before he received the wound, and on being struck was immediately aware of the loss of sight. Since the injury he had felt greatly the imperfection of being able to see with only one eye. These statements of the man are important, as they show that previous to the stab he enjoyed sight with both his eyes, and that the ophthalmoscopic appearances were the result of the injury and not of pre-existing disease.

On admission, the pupil was slightly dilated and uninfluenced by light. The globe was uninjured, but on the upper eyelid there was a recent scar indicating the site at which the knife penetrated the orbit, and this scar corresponded to the cut in the rim of the hat through which the knife first passed. The eye was quite blind; it had not even perception of ophthalmoscopic light. Examined with the ophthalmoscope, the optic nerve presented the appearance of commencing atrophy. The optic disc was whiter than that of the other eye, and the arteries were small and thready. The humours of the eye were perfectly clear.

The man has since been several times at the hospital, and when last seen, about three months after the accident, the optic disc had assumed the milky white and flattened appearance of confirmed atrophy.

ROYAL INFIRMARY, EDINBURGH.

CASE OF TRAUMATIC TETANUS TREATED WITH EXTRACT OF CALABAR BEAN.

(Under the care of Professor SPENCE.)

THE following case, for the notes of which we are indebted to Mr. Andrew S. Currie, M.B., is interesting as bearing on the therapeutic effects of Calabar bean on tetanus, as the vale of the remedy is still *sub lite*. In this instance the administration of the drug was begun early and freely continued, but without much apparent good effect.

A. H——, aged eighteen, was admitted November 2nd, 1874, in consequence of injuries caused by a railway accident which had occurred two days previously. On admission the toes of the left foot, which had been severely bruised, were gangrenous, and the gangrene showed a tendency to spread up the dorsum of the foot. On the inner side of the left thigh there was a large lacerated wound, and there was a smaller lacerated wound on the outer side of the same thigh, the affected skin at both wounds being sloughy and fetid. There were no marked constitutional symptoms. Mr. Spence at once performed amputation at the ankle. When the india-rubber compressor was relaxed there was almost no bleeding, and the tibial arteries were pulsating very faintly. To avoid endangering the vitality of the heel-flap, only one stitch was put in, and beyond a piece of lint no dressings were used. The leg was wrapped in cotton wadding, and the wounds in the thigh were dressed with charcoal poultices.

Nov. 3rd.—There was slight oozing through the night, which was arrested after tying a vessel.

5th.—The wounds of the thigh looked healthy, but were very sensitive. Charcoal poultices to be discontinued, and boracic lint to be applied.

7th.—The wounds in the thigh look very red and irritable. Zinc ointment used as a dressing.

9th.—The wounds in the thigh look more healthy; a small slough is forming on the margin of the heel-flap.

10th.—The patient complains of sore-throat. On examination, the tonsils and uvula were found to be slightly inflamed. Pulse 120; temperature 100°. Chlorate of potash ordered to be taken internally, and to be used as a gargle.

11th.—When the patient was desired to open his mouth, that his throat might be examined, his jaws were found to be firmly locked; there was well-marked risus sardonicus, and the brows were wrinkled. The patient had not felt any stiffness of the neck. The wrinkling of the brows had been observed before, but was attributed to the pain caused by dressing. Professor Spence saw the patient at noon, and ordered the following treatment:—A turpentine enema, the frequent exhibition of tincture of cannabis indica in twenty-five drop doses, nutrient enemata with brandy, hot bottles to be applied to the sides, mercurial ointment with extract of belladonna to be rubbed over the vertebral grooves, ice-bags to be applied to the spine, and opiate fomentations to the affected limb. At 4 P.M. the tincture of cannabis indica was suspended, and the alcoholic extract of Calabar bean,

in one-sixth of a grain doses every fifteen minutes, substituted. The patient could swallow easily.—7.20 P.M.: The patient had a severe spasm which threatened asphyxia, which was relieved by the inhalation of chloroform.—8 P.M.: Pulse 130; temperature 103°. There were slight spasms of the affected limb and slight rigidity of the muscles of the neck.—12.30: The pupils were much contracted, and there were twitchings of the affected limb and heavy sweatings. The patient had slept since 10 P.M., when he got a dose of bromide of potassium.

12th.—10.45 A.M.: Stiffness in the throat complained of, patient feeling as if the throat were being grasped. He could open his jaws slightly. Every few minutes he drew a deep breath, and held it for a short time. The face was flushed. Bowels freely moved. Pulse 100.—At 2.15 P.M. the spasms were more severe. Chloroform was administered occasionally. Pupils normal.—4.15: Pulse 120, weaker. Calabar bean suspended.—4.45: Slight hiccough came on after the administration of chloroform.—7.30: Well-marked opisthotonos, with threatened asphyxia. The pulse was now stronger. Calabar bean to be resumed, in one-third of a grain doses, every twenty minutes.—At 8 o'clock the patient was considerably easier, and the masseters were pliant.—At 11 there was severe intestinal pain. Thirty minims of solution of morphia were given, after which the patient slept for two or three hours. The strength was kept up by enemata.

13th.—5 A.M.: There was frequent spasm of the abdominal muscles. The fæces were passed involuntarily, and there was numbness of the left arm and hand; no other signs of paralysis. The pupils were much contracted.—11 A.M.: Slight threatening of opisthotonos after dressing.—2 P.M.: The spasms were more frequent, but not so long continued. There was severe pain in the belly, for which opiate fomentations were applied.—Twenty grains of chloral hydrate were administered.—5 P.M.: Patient had slept an hour and a half.—At 6 P.M. the spasms were more frequent and more severe; chloroform administered.—7.30 P.M.: Thirty grains of chloral hydrate were administered, after which the patient slept for twenty minutes at a time, awaking with a scream, and complaining of pain in the region of the diaphragm. Pulse 100; temperature 102°; heavy sweats.—12 P.M.: Sleeping calmly; the facial muscles were soft and pliant. The abdominal muscles were hard and tense, and the ensiform cartilage and lower ribs were drawn in by the contraction of the diaphragm.

14th.—3 A.M.: There was threatened syncope. The patient had vomited and passed urine and fæces involuntarily. There was intense spasm of the diaphragm, and the abdominal muscles were tense and hard. The extract of Calabar bean was suspended (altogether twenty-two grains were taken). The pulse became stronger after the administration of nutrient enemata with brandy. Chloroform was administered for the spasms, which were very frequent. At 7.30 the patient was much weaker; he was in a troubled sleep, from which he awoke with a scream, but was able to swallow some brandy, though with considerable difficulty. Shortly after noon there was well-marked opisthotonos, with strong spasm of the diaphragm. Chloroform was administered.—12.45: After several shorter paroxysms the patient died exhausted.

HÔPITAL ST. ANTOINE, PARIS.

CASE OF DIFFICULT MENSTRUATION, WITH SOME CLINICAL REMARKS.

(Under the care of Dr. PETER.)

THE following case, though of frequent occurrence, and simple in its kind, may be found of much practical interest, as helping to solve some of the little difficulties of everyday practice.

On Sept. 23rd Dr. Peter was called to see one of the Sisters of Mercy of the hospital, who was suffering intensely from abdominal ailment. This sister, aged nineteen, and of delicate constitution, was habitually constipated, and ascribed her symptoms to confinement of the bowels. Such also was the opinion of her friends. Consequently a purgative had already been administered, and had operated three times without affording any relief.

Dr. Peter, on examination, found no fever, but a small pulse and anxious countenance. The patient complained of pain in all the abdomen, but especially the lower part of it. She also complained of excessive pain in the lower part of the back. Contrary to the exclamation of the lady superior, that "it was all constipation," the complaint of pain in the lower part of the back was too highly suggestive in Dr. Peter's mind of suffering of the hypogastric plexus, whence the uterine nerves evolve, and he soon formed the diagnosis of utero-ovarian trouble, and, more precisely, painful menstruation.

On account of the age and profession of the patient vaginal examination was out of the question. Dr. Peter therefore practised hypogastric exploration, with the precaution, to which he attaches great importance, and which he always takes in such cases, of using only one finger, the index, which he carries successively over the abdominal wall, pressing slightly, and thus depressing only a very limited portion of the parietes and subjacent organs at a time. Thus he is able to analyse them as it were. In this case the whole abdomen was distended and tender, but two points were especially painful—one on the mesial line near the pubis, the other to the left of the former—evidently the left ovary and the uterus, which were in a state of congestion previous to ovulation and expulsion, and affected with pain, as in some delicate females. The question of an intestinal affection was therefore discarded, notwithstanding the assertion that the courses were expected in only ten days; and hot poultices (sprinkled with laudanum) to the abdomen, and a small enema, with ten drops of laudanum, to be used twice daily, were ordered.

The next day the abdominal distension had much increased; the pulse had risen to 92; the pain was more intense; and there was absolute want of appetite. The skin was hot, the "abdominal groove" of the face very marked. In presence of these symptoms Dr. Peter ordered a blister to the hypogastrium.

In the night of the 24th the menstrual blood made its appearance, and was followed by manifest relief on the 25th.

On the 26th, however, the bleeding stopped, the pains recurred more severely than ever, and the abdomen again swelled out. Nausea and vomiting supervened, the pulse rose to 110 and became quite small and firm, the face looked shrunk and was cold and pale, as were also the extremities. In this case, as in similar ones, the paleness and chill were due, according to Dr. Peter, to vascular contraction forming a sort of tetanus, produced by the painful shock of any pain along the great sympathetic to the whole of the system, and especially to the vaso-motor nerves. As this phenomenon shows itself in the highest degree in peritonitis, and originates in the solar plexus, Dr. Peter, without hesitation, caused six scarifying cupping-glasses to be put to the lower part of the abdomen, the origin of all the evil being the utero-ovarian trouble.

On the 27th the pulse was better, the face more cheerful, the extremities warmer—in a word, reflex vascular contraction had ceased with the pain, and the hypogastric and solar plexuses were composed.

From that time the pain gradually abated, only making itself felt when the patient turned suddenly in her bed. She then felt as if "a heavy body moved in her abdomen." Dr. Peter remarked that it evidently was the enlarged ovary and uterus, which were, perhaps, pulled by some of those adhesions that form so rapidly in these cases of benign appearance which in these days are treated with so little activity.

Notwithstanding the disappearance of the inflammatory symptoms, Dr. Peter caused the patient to remain eight days longer in bed, as he was convinced that rest was indispensable for a complete recovery, and that premature movements communicated to the internal genital organs, when congested, might cause a recurrence of the inflammation.

Thus, in this case, local and physiological congestion had passed into inflammation, which, in turn, threatened to extend from the utero-ovarian peritoneum to the whole peritoneal tract. Dr. Peter lays stress on the uselessness of the blister and the effectiveness of the scarificator, and remarks that if he did not use depletion immediately, it was because in France, and especially in Paris, medical men are prevented from doing so by a fashionable prejudice which he calls "the spectre of anæmia." "Through a wild terror of this spectre," he says, "we allow inflammation to go on and become formidable, for want of abstracting a

few drops of blood; and certainly, in this case, few physicians would have consented to an application of the scarificator at the beginning of the disease, and the same would have been accepted only, perhaps, when the increasing gravity of the symptoms would have called for urgent measures." Besides the efficacy of the bloodletting, Dr. Peter called attention, in connexion with this case, to other points which we have already mentioned —namely, the diagnostic value of pain in the lower part of the back, and the advisability, for diagnostic purposes, of exploring the abdomen with only one finger. "In uterine affections especially," he said, "we can thus localise the evil with the greatest precision, and in cases of puerperal affection it is of the highest importance to do so, for it is then necessary to make out whether the uterus and its appendages are the primary seat of the mischief, whether the pelvic peritoneum is involved in consequence, whether itself alone or the whole peritoneum is involved; and upon this important diagnosis, which can be made with only one finger, depend both prognosis and treatment."

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of this Society on December 2nd, 1874, Edward J. Tilt, M.D., President, in the chair, C. R. Browne, M.D., and William Reed, L.S.A., were elected Fellows of the Society.

Mr. S. H. BIBBY exhibited a cast of an Antique Group representing the Circumstantials of Labour in very early times, taken from the original found at Golgas, in Cyprus, in a temple erected in honour of Baal, the supreme divinity of generative power, and Ashtoreth, that of productive power. The group consists of four figures, the mother reclining on a couch, an attendant at her head, and the nurse sitting at the foot of the couch with the new-born infant in her lap. It was probably made 300 years before the Christian era.

Dr. TILT exhibited some old books lent by Mr. Donald Napier—an old Bible in which the process of confinement was portrayed; "Childbirth, or the Happy Delivery of Women"; a translation of Mauriceau's work on the Diseases of Women with Child; and the "Expert Midwife." Dr. Tilt also exhibited a portrait of Paul Chamberlen, presented by Dr. Taylor, of Birmingham, considered to be a faithful likeness.—Dr. WILTSHIRE stated that the Royal Medical and Chirurgical Society possessed the original set of forceps belonging to Chamberlen, and had kindly lent them for the inspection of the Fellows that evening.—Dr. MURRAY suggested that, if the books were not very valuable, the owners would do well to present them to the Society.—Dr. AVELING stated his belief that the portrait was that of Peter Chamberlen, the inventor of the forceps, and not of Paul, who was the second son of Peter.

Dr. GRIGG exhibited a specimen of a Hydrocephalic Child. It lived to the fourth day, cried, took nourishment, and moved all its limbs with perfect ease. The tumour forms, as it were, a second head at the upper part of the skull, and consists of a bag formed of the expanded brain, the membranes, and the scalp. Dr. Grigg also exhibited a modification of Albert Smith's (of New York) Pessary, the shaft being made extremely narrow in order not to dilate the lower half of the vagina and weaken the main support of the uterus thereby. He (Dr. Grigg) had tried it successfully in cases of retroflexion. Dr. Grigg also brought forward a modification of Ellinger's rapid Uterine Dilator. The blades are made extremely thin so as to act like a wedge; their length is limited to an inch and three-quarters; an index in the handles enables the operator to know how wide the blades are expanded. He (Dr. Grigg) had employed it in cases of anteflexion with dysmenorrhœa successfully.

Dr. MURRAY exhibited a specimen showing the three forms of Disease of the Fibroid Uterus, subperitoneal, interstitial, and submucous. The case was seen too late to allow of dilatation, and possibly the removal of the pedunculated intra-uterine fibroid body. The practical and interesting points which arose were whether the hæmorrhage would have been less after the growth had been removed, notwithstanding the much enlarged and fibrous state of the whole uterus. Dr. Murray was inclined to believe that little or no good in this case would have resulted from any surgical interference. The condition had existed for at least five or six years.—Dr. TILT inquired if the loss of blood had been considerable.—Dr. MURRAY replied that it was a continuous slight drain, not in a stream. There were clots which were moulded in the uterus occasionally.—Dr. HEYWOOD SMITH inquired how long the hæmorrhage had existed, and for what symptoms Dr. Murray had been consulted. If hæmorrhage had continued for five years, he thought something might have been done to check it.—Dr. BARNES thought that probably five years ago the growth was intra-uterine, not polypoid. This condition had increased of late. It was well to remove such growths, as thereby the afflux of blood was diminished. The submucous ones caused most hæmorrhage. The other one might have passed into an inactive or passive state.

Dr. GEORGE HOGGAN read a paper on the "Nature, Cause, and Treatment of Membranous Dysmenorrhœa," illustrated by diagrams and microscopic specimens. The specimen was formed of two different structures, continuous with each other—one from the vagina, consisting of the well-known pavement cells of the part, the other from the uterus, and formed of embryonic tissue in its early stage, and identical with the structure of the decidua. This rare specimen explained the diverse views on the subject; one school holding that it was an exfoliation, and the other that it was an exudation, the fact being that different observers had examined different ends, and therefore structures, of the same membrane. From the symptoms of the case, the membrane seemed due to inflammation. To the naked eye and under the microscope the vaginal portion resembled such products of inflammation as the skin of a blister or the membranous cast of the urethra thrown off in urethritis. The conclusion, therefore, was that the uterine portion continuous and contemporaneous with it was also due to inflammation; but, *vice versâ*, the uterine portion which was identical with the decidua was probably due to the same cause—i.e., excessive vital stimulation,—and the vaginal portion continuous with it likewise. It was therefore reasoned that inflammation and excessive vital stimulation were the same thing, the latter expression being now offered as a new and correct definition of inflammation. The rational treatment he had employed with success was to lower generative action by anaphrodisiacs, as the bromide of potassium, in large doses, prior to the commencement of the period.

The Report of the sub-committee on Dr. Meadows's specimen of Dysmenorrhœal Membrane was read. After giving a minute description of the microscopic and naked-eye appearance of the specimen, Drs. Aveling and John Williams concluded that it was the superficial layer of the mucous membrane of the upper portion of the uterus; but of the condition, general or local, which led to its detachment, as a whole, they were unable to find any anatomical indication. —Dr. JOHN WILLIAMS, in reference to Dr. Hoggan's statements, said he was surprised to find the existence of the mucous membrane of the uterus called in question. The labours of some of the most eminent histologists who have lived during the last fifty years, in connexion with this subject, have supplied the evidence referred to. One of the microscopical specimens exhibited by Dr. Hoggan at the last meeting of the Society was a section of the decidua vera. It had a structure similar to that of the mucous membrane of the uterus shortly before a menstrual period. It is not uncommon to meet with small masses of jelly-like substance in the menstrual fluid in persons who suffer from dysmenorrhœa. They can be hardened in alcohol, and sections can be made of them, and these sections present a structure similar to that presented by the specimen just exhibited — viz., some round and fusiform cells scattered here and there irregularly in patches in a transparent substance; occasionally a columnar epithelium cell is met with, but more commonly round and fusiform cells. A similar arrangement is frequently met with in mucus passed from the bladder.

The Report on Dr. Carter's specimen, by Drs. Routh

and Brodie, was then read. The weight could not be determined as the lungs had not been removed, which also precluded the hydrostatic test. Its length was twelve inches. The left testis was within the abdominal cavity; the right could not be found. The eyelids were adherent, and the membrana pupillaris present. The nails had not reached the extremity of the fingers. The hairs were dark and fully formed. No valvulæ conniventes were found, nor were there any convolutions of the brain. These signs would rather fix the age at about six months. On the other hand, the well-marked fibrous condition of the skin, the existence of meconium in the colon in abundance, and the advanced state of ossification of the skeleton, especially in the head, would rather point to a later period of life.

The adjourned discussion on Dr. Gervis's paper on "Retroversion of the Gravid Uterus" then took place, and will be reported next week.

Reviews and Notices of Books.

The Elements of Embryology. Part I. By M. FOSTER, Prælector in Physiology in Trinity College, Cambridge; and F. BALFOUR, Fellow of Trinity College. London: Macmillan. 1874.

A WORK like the one before us has long been needed in this country. In the "Entwickelungs-geschichte" of Kölliker the Germans had, up to 1870, a complete account of what was then known of the development of the embryo, laid down by the hand of a master; but to the great majority of English readers the language in which it was written rendered it a sealed book, and those who wished to know more of the subject than was contained in the ordinary text-books could only refer to Allen Thomson's admirable article in the supplementary volume to the "Cyclopædia of Anatomy and Physiology," and regret that that able physiologist found himself unable to comprehend in his history of the ovum an account of the development of the embryo. During the last few years such immense advances have been made in the application of the microscope to the study of histology that, although the landmarks long ago laid down by Rathké, Müller, Bischoff, and others, require but little modification, an infinite number of details have been made out by recent observers that have materially aided in giving definition to many points that were previously hazy and unintelligible.

The vast improvements that have been made in the various methods of hardening delicate tissues with chromic, picric, and osmic acids, of staining them with carmine and hæmatoxylon, and of imbedding them in paraffin, wax, and oil, and in spermaceti, have proved of signal service in enabling delicate points of structure to be made out, and we hail in this treatise the first satisfactory account we possess of the entire subject of embryology in the bird, from the first entrance of the ovum into the oviduct to the emergence of the fully-formed chick from the egg, as elucidated by these and kindred aids to microscopical research.

The order in which the subject is considered seems to us excellent. The authors commence with a description of the hen's egg and the changes which take place in it up to the beginning of incubation; this is succeeded by a chapter containing a brief summary of the whole history of incubation; then, doubling back, they give, as far as practicable, an account of the changes that take place on successive days up to the sixth day, and from thence to the end of incubation. A chapter succeeds which will prove useful to many readers, on the development of the skull, and which the authors hope may serve as an introduction to the study of Mr. Parker's elaborate memoirs. The last chapter is devoted to practical instructions for studying the development of the chick.

The text is printed in two types, the larger containing the more important facts, whilst the smaller is devoted to the discussion of moot points, and the statement of conflicting views or imperfectly ascertained facts, as well as to the historical development of certain doctrines. The language used throughout is most simple and intelligible, and the authors do not scruple to repeat themselves when clearness is gained by repetition. As might be expected, several terms new to English readers are introduced, amongst which those of "epi-," "meso-," and "hypo-blast," "splanchno-" and "somato-pleure," are the most striking, but which immediately recommend themselves by their simplicity and applicability. The following passage, which gives an account of the commencing development of the *heart*, will serve to show the general style of the authors:—

"It is in the head-fold that the formation of the heart takes place, its mode of origin being connected with that cleavage of the mesoblast and consequent formation of splanchno-pleure and somato-pleure of which we have already spoken. At the extreme end of the embryo, where the blastoderm begins to be folded back, the mesoblast is never cleft, and here consequently there is neither somato-pleure nor splanchno-pleure; but at a point a very little further back, close under the blind end of the foregut, the cleavage (at the stage of which we are speaking) begins, and the somato-pleure and splanchno-pleure diverge from each other. They thus enclose between them a cavity, which rapidly increases behind by reason of the fact that the fold of the splanchno-pleure is carried on towards the hinder extremity of the embryo, considerably in advance of that of the somato-pleure. Both folds, after running a certain distance towards the hind end of the embryo, are turned round again, and then course once more forwards over the yelk-sac. In this way the cavity arising from their separation is closed below. It is in this cavity—which, from its mode of formation, the reader will recognise as a part (and, indeed, at this epoch it constitutes the greater part) of the general pleuro-peritoneal cavity—that the heart is formed. It makes its appearance at the under surface and hind end of the foregut, just where the splanchno-pleure folds turn round to pursue a forward course, and by the end of the first half of the second day has acquired somewhat the form of a flask, with a slight bend to the right. At its anterior end a slight swelling marks the future bulbus arteriosus; and a bulging behind indicates the position of the auricles. It is hollow, and its cavity opens below and behind into two vessels called the omphalo-mesaraic veins, which pass outwards in the folds of the splanchno-pleure, at nearly right angles to the axis of the embryo. The anterior extremity of the heart is connected with the two aortæ. Soon after its formation the heart begins to beat, its at first slow and rare pulsations beginning at the venous and passing on to the arterial end. It is of some interest to note that its functional activity commences long before the cells of which it is composed show any distinct differentiation into muscular or nervous elements."

To this account succeed two pages of small text, giving the views of v. Baer, His, Afanasieff, and Klein, and then follows a description of the formation of the primitive aortæ.

Throughout the authors show themselves to be familiar with the literature of the subject, from the earliest to the most recent dates.

The text is illustrated by upwards of seventy figures, many of which are original, and, after careful examination, we have been struck with the singular freedom from errors that both the text and the references exhibit, indicating the care with which the whole has been revised.

The present work, we are glad to say, is only the first of three parts, the authors proposing in a second part to consider the embryonic histories of other vertebrates, in so far as these differ from that of the bird; whilst the third part will be devoted to an exposition of the main facts of invertebrate embryology, and to the discussion of general morphological considerations.

Upon the whole, we regard the work as a very important

accession to English literature upon this branch of physiological research, whilst its very moderate cost contrasts favourably with that of Coste and other great treatises on embryology.

Searches for Summer: showing the Anti-Winter Tactics of an Invalid. By C. HOME-DOUGLAS. Edinburgh and London: Messrs. Blackwood. 1874.

WITH the precision of an expert, and the ease of an accomplished layman, Mr. Home-Douglas discourses on a theme of perennial interest for us islanders. How to dodge the winter has always been an engrossing question for our invalids—even for the least hopeful of the three classes into which Mr. Home-Douglas divides them. For these "the organically diseased" in his classification, life may be prolonged and suffering alleviated by the exchange of our sombre and vicissitudinous winter for the bright sky and equable temperature of Mentone or Malaga; for those whose disorder is functional only (the second group in his sick-catalogue) a similar exchange may effect complete restoration to health; while for the third and last type of invalid, he who has no disease at all, but has come abroad "to relieve the *ennui* of country residence with a little fun and flirtation," recovery is almost certain in any popular health-resort on the shores of the Mediterranean.

Mr. Home-Douglas of course is quite alive to the importance of combining with change of climate a scrupulous attention to diet and all other details of the *modus vivendi*, the neglect of which may lie at the root of the patient's disorder. No climate in the world will save the invalid from himself, if his physical or mental habits continue at variance with the ordinary laws of health; all that the best climate can do is to give him a better chance for the wholesome effect of an altered and improved regimen. Such being the case, Mr. Home-Douglas proceeds to pass in review the health resorts traditionally frequented by the invalid; and balances their conflicting claims with something of the physician's exactness. Hardly two places in the same latitude and longitude are precisely alike; while even the same place becomes suddenly unlike itself at various times of the year. Algiers, for example, comes out of his hands in very different guise from that given to it by its indiscriminate admirers; and while its many merits are loyally recognised and scientifically accounted for, it is shown to be not only quite inefficacious, but eminently unsafe, under certain meteorological conditions. In winter its climate is so fickle as to necessitate the constant perusal of a well-placed thermometer. When the invalid sees a temperature abnormally high, accompanied (as at first it generally is) by the most exquisite weather, he is warned not to take a walk, still less a drive, without making provision for an instantaneous change. At Biarritz and Pau, again, Mr. Home-Douglas's experience in the winter of 1863-64 showed the mean temperature of the former to be higher than at the latter, as, indeed, might be expected, "since Biarritz is nearly on the level of the sea and close to it, while Pau is sixty miles off and seven hundred feet above it." The difference of temperature is greatest at night, and least at midday; while the air is decidedly drier at Pau than at Biarritz, the proximity of the sea to the latter being close enough to afford a never-failing source from which to draw the moisture held in suspension in the atmosphere. Cannes, Mentone, San Remo, and Nice, come next under notice, and the same observant and discriminating eye shows itself in apportioning to each its special merit, as in the case of Algiers, Biarritz, and Pau.

The Spanish and Italian health resorts receive similar attention. Cordova, Granada, Madrid, Malaga, Seville, and Valencia, though geographically having much in common, are, so far as the invalid is concerned, very unlike each other, Malaga being the flower of them all for a "winter climate as nearly perfect as any in the world," while Madrid is proverbially the most uncertain and trying place for the health-seeker in Europe. Mr. Home-Douglas condemns Naples and Rome as refuges from the winter, and regards Florence as worse than Rome and Genoa, and nearly as bad as Edinburgh. Marseilles, again, "like the whole south-east of France, is liable to visitations of the terrible mistral, compared to whose venom even the fangs of our own spring north-easters are as the bite of the flea to the sting of the scorpion." But we have said enough to indicate the value of Mr. Home-Douglas's careful and brightly-written book alike for the prescribing physician and for the invalid tourist.

The Present State of the Army Medical Service as a Life Career for the Surgeon. By EDWARD HAMILTON, A.B., M.D. Univ. Dub., Vice-president of the Royal College of Surgeons in Ireland, &c. Dublin: Fannin and Co. London: Longmans, Green, and Co. 1875.

WE are in receipt of two pamphlets on the present state of the Army Medical Service; one by an officer of high rank and distinguished service in the Department, Surgeon-General Mouat, V.C., C.B.; and the other by the Vice-president of the Royal College of Surgeons in Ireland, Dr. Edward Hamilton, who, as one of the surgeons to Dr. Steevens's Hospital and lecturer in its medical school, cannot fail to make his influence felt. Dr. Hamilton deserves very great credit for the trouble he has taken—and it has evidently been very great—to make himself master of all the details bearing upon "the present state of the Army Medical Service as a life career for the surgeon," which is the title of his excellent and ably written pamphlet. Both these productions are favourable to the regimental, as opposed to the general staff system, but that by Mr. Mouat points out a way in which the former system can be adapted to the existing organisation, and he makes some suggestions for the removal of several of the grievances of medical officers. Dr. Hamilton is a thorough advocate of the regimental system. He has not only set forth every argument that can be urged in its favour with much clearness and judgment, but he has carefully gone into all the grievances of the medical officers, and indicated the nature of the changes that are, in his opinion—which has evidently been formed after mature consideration—absolutely needful to make the Army Medical a contented and efficient service. He has made out a capital case for the regimental system, which we would advise our readers to peruse for themselves. It would be impossible and useless for us to discuss this branch of his subject; but we are bound to say that the War Office authorities of the late Government did their best to bring the advantages of the old system into strong relief by their method of procedure in starting a new one. As the readers of THE LANCET are aware, very many years have elapsed since this subject was first of all discussed in our columns. The scheme of a general staff system found its earliest expression on the occasion of the Government inquiry by a Commission into the state of the Army Medical Service. It was never advocated that any change should have a retrospective bearing, or that the incumbents of regimental appointments should be summarily dispossessed. We believed then, as we believe now, that a department like the medical, occupying a position between two bodies—Horse Guards and War Office—both of which were opposed to its interests, would gain by relying more on the latter than the former, and that its influence as an important branch of the service would never be exercised until it came to occupy a more independent position as a separate service allied to the other scientific

corps. We still hold that if this change of system had been properly organised and properly brought about, it need not have been attended with any injurious effect, and the reason that it was not properly carried out is manifestly to be ascribed, in our opinion, to the fact that the service did not possess the influence that it would have possessed had it not been dependent on two powers, either of which was willing to concede what the other was as determined to withhold. Be all this as it may, however, we heartily commend Dr. Hamilton's pamphlet to our readers' best attention, for the medical officers' case is exhaustively stated, and in a way that the authorities will find it very difficult indeed to answer. We shall probably have another opportunity of reverting to some of the points contained in both the pamphlets.

Foreign Gleanings.

MODE OF ACTION OF EMETICS.

THE mode of action of emetics has recently been investigated in Professor Vulpian's Laboratory of Physiology in Paris, and Dr. Chouppe has made known the results. It follows from a great many experiments that emetin produces vomiting through a different mechanism from tartar emetic and apomorphin. After section of the vagus nerves in the neck, and after waiting till all spontaneous vomiting had ceased (so as to avoid every possible risk of error), it was observed, on injecting from one-fifth to four-fifths of a grain of apomorphia into the subcutaneous cellular tissue, that vomiting came on with the same rapidity (from two to five minutes) as if the nerve had not been touched. It was quite different with emetin, and the animal, being placed in the same conditions, did not vomit for several hours after the injection.

The same experiments were repeated comparatively between tartar emetic and emetin. After injection of a sufficient dose of tartar emetic into the veins of a dog, vomiting occurred exactly in the same manner, as quickly and as abundantly whether the pneumogastric were divided or not. On the contrary, injection into the veins of an emetic dose of emetin produced no vomiting when the nerve was cut. In dogs which had not vomited with emetin, tartar emetic and amorphia produced their ordinary effect.

The conclusion is, that the action of tartar emetic and amorphia is exerted directly on the bulb, where the origin-nucleus of the vagus is the peripheric point of the reflex arch, whilst emetin acts directly on the nervous extremities whilst it is being eliminated by the stomach.

TREATMENT OF BILIARY CALCULI.

At a late meeting of the Société de Biologie, Dr. Laborde gave the results of his researches on "Biliary Calculi; why they are painful, and how they should be treated." The secreting bile-passages, he said, were contractile, and became affected with spasms under the influence of direct or indirect excitement. Their contractility was like that of the smooth muscular fibres of organic life, the existence of which in the walls of the bile-channels had been shown by histological researches and physiological experimentation. The mucous membrane of the passages was possessed of great sensitiveness, which manifested itself under the influence of exciting causes, both by intense pain and by reflex action, as shown in the spasm of the biliary canals. These phenomena were especially determined by the presence of, and contact with foreign bodies (biliary calculi), the spontaneous migration of which was rendered difficult by these circumstances, and, when effected, would occur only after some time, with this particularity, that the foreign bodies might recede even into the biliary vesicle. Morphia and hydrate of chloral administered simultaneously formed the best mode of treatment. They exerted both an anæsthetic and paralysing influence, with the effect of producing cessation of the spasmodic state, distension of the passages, and accumulation of the biliary fluid, which acted on the foreign body by a kind of *vis à tergo*, and forced it down the intestines.

WINTER PRURITUS.

Dr. Louis Duhring, of Pennsylvania University, has described, in the *Philadelphia Medical Times*, a kind of pruritus which he calls "winter pruritus." The cause of it is not known. It appears with the beginning of the cold weather and disappears in spring. It is not connected with the wearing of wool, or with uncleanliness. It appears at all ages, in both sexes, and in otherwise healthy subjects. The annoyance chiefly affects the lower extremities (internal surface of thighs, knees, calves of legs, and instep), particularly where there is no hair; occupies both legs symmetrically, and is more intense at night. There is no eruption. It cannot be mistaken for lichen pilaris, which is caused by accumulation of epidermis and sebaceous matter at the apertures of the pilous orifices in filthy people; is never seated in the popliteal space, but most commonly on the internal surface of the thighs, and is often unattended by itching. Dr. Duhring thinks that it depends on a general condition. He has found arsenic of no use, and thinks alkaline baths the best treatment.

THE PARASITIC NATURE OF PITYRIASIS CAPITIS.

The parasitic nature of pityriasis capitis has recently been shown by M. Malassez, who has made out the disease to be due to a microsporon described by Dr. Chincole. The consequence is that internal treatment must be done away with, and that an anti-parasitic treatment is the one required. M. Malassez advocates the following unguent:—Cocoa-butter, castor-oil, almond-oil, of each five drachms; turbith mineral, fifteen grains. Smear the scalp with the ointment twice daily, and wash the head with soap three times every week. It is necessary to cut the hair short and brush the head briskly so as to remove the pellicles and lay bare the parasite. A larger quantity of turbith mineral may be used without inconvenience.

INTRA-VENOUS INJECTIONS OF CHLORAL.

According to a communication recently made to the Belgian Academy of Medicine by MM. Deneffe and Van Wetter, it is stated that the number of cases of intra-venous injection of chloral performed either by the above medical men in Belgium, or by Dr. Oré at Bordeaux, now amounts to nine. In all the cases the injection proved successful, and was unattended by any bad symptom, so that notwithstanding the strong opposition which the practice has met with on theoretical grounds, it is not the less true that, used with proper caution and by able hands, it has not yet been attended by any accident.

RECURRENCE OF MEASLES FOUR WEEKS AFTER A FIRST ATTACK.

A child of fifteen months (recorded by Dr. L. Faye in *Deutsche Klinik*, No. 24, 1874) was attacked with measles at the same time as a great many other children. The attack was a very mild one, and lasted only seven days. A month after the first attack a second eruption, of the same mild character, showed itself. In connexion with this case the author mentions that, at Christiania, Bidewsky observed a like relapse after fifteen days' interval, and Taulon after three weeks. Similar facts have been observed with scarlet fever. The explanation of these facts is rather difficult, as the idea of a new infection can scarcely be admitted.

LOCAL ANÆSTHESIA IN CASES OF LABOUR.

Dr. Friedländer relates (in *Deutsche Klinik*, No. 30, 1874) that being called to a woman who was suffering intolerable pain in the sacral region, he resorted to an application of chloroform (one part) and ether (two parts), after having vainly tried several other means. He obtained by this means total cessation of all pain until perfect delivery. After having successfully tried the same application in a great many cases, he recommends its employment as an anodyne for the pains of parturition.

LIPOMA WEIGHING UPWARDS OF SEVEN POUNDS.

Dr. Demarquay, of the Hospice Dubois, recently removed a lipoma weighing 3200 grammes from the shoulder of a woman aged seventy-three. The tumour had been twenty years in existence, and the old woman used to wear it in a bag, and carry it on her shoulders as a soldier his knapsack. The operation was perfectly successful, and the patient is doing well.

THE LANCET.

LONDON: SATURDAY, JANUARY 2, 1875.

ALIKE in all callings, the commencement of a new year is a favourable time at which to make some halt in accustomed progress, to glance back over the road by which we have travelled, to survey the ground under our feet, and to look forward upon the still unexplored country which we are about to enter. In no calling is such an employment of time more salutary than in Medicine, for in no other is there greater liability to mistake new phrases for new ideas, to travel in a circle, and to find ourselves now and again confronted by errors from which we or our predecessors had in former time parted company. The scientific history of every year fades, of course, by imperceptible gradations, into the histories of the years which precede and follow it; and there are few of them which can be marked off from their surroundings by any distinct lines of separation. Even when great discoveries have been given to the world, such as the uses of vaccination or the uses of anæsthesia in surgery, the more accurately we study the facts, the more it becomes apparent that such discoveries are the legitimate offspring of ancestry—that they are the natural development of antecedent speculation and experiment, the fruits of the labours of those who had sown good seed, but were not spared to reap its harvest, the inevitable conclusions of the time to which they come. It is never easy for those who are bearing the burden and heat of the day to read the signs of their own times rightly, to interpret the tendencies of the intellectual conflicts around them, to discern what will in future be considered the special characteristics of the period. It may well happen that some doctrine which is now taught timidly and with reservation, or of which, although it is taught, we do not yet see the significance, will be that which will hereafter shed most lustre upon its authors, and of which the dawn will be held in remembrance when the more dogmatic opinions which now prevail, and the more active controversies which are now raging, have all been forgotten. On such points those only may decide who will see our work from the vantage-ground of posterity; but, so far as our own view extends, we think we shall not be wrong in affirming that physicians have almost exhausted the observation of symptoms and the empirical application of remedies, and that the future of their art has its chief promise in the investigation of vital phenomena by the light of physical science and of molecular change. The influence of the nerves upon nutrition, which CULLEN may be said to have seen as in a glass darkly, and which for a time was again obscured by a returning wave of the old doctrine of the humoral pathologists, is once more asserting itself in no doubtful manner; and the morbid modifications of nerve influence are no longer explained by changes in the fluids which excite the ganglia, but rather by changes in the ganglia themselves. The hereditary character of these changes, or at least the frequent transmission of a liability to them, on which so much stress has been laid, and so much light thrown, by the labours, too soon interrupted, of ANSTIE, seems likely to furnish a scientific basis of generalisation around which the vague experience of ages about inherited disease will by and by be collected, and possibly brought into some shape which will assist us to prevent evils which we now only deplore. The current investigations into the essential causes of self-propagating diseases, while they have already led to assertions which perhaps represent the hopes and predilections of their authors rather than the sure results of scientific inquiry, will certainly not be altogether barren, and may be expected, even by the least sanguine, to simplify the problems which epidemics suggest. It is surely a sign of progress that we, as compared with our forefathers, are steadily advancing from the general to the more particular, from macroscopic to microscopic research, from the nerve centre to the nerve cell, from the muscle to the fibre, from the man to the molecule. Whilst moving in this direction our art has won many victories in its mere outpost skirmishes with individual maladies; but its most signal victory is in its advance along the whole line. Even since the time when a systematic registration was first set on foot, we have already a diminution of the rate of mortality, and a sensible increase in the duration of human life.

While such is the position of preventive and curative medicine, it is worth while to glance also at the position of medicine in its social aspects; for in these people now living have seen a change which is little less than a revolution, and which has been steadily wrought by the increasing culture of the individual members of the profession. Only a few years ago it was regarded as a desirable thing that the mental activity of a doctor should be all expended in his endeavours to heal the sick, or at least that the unexpended residue should be carefully concealed from public view. The common ideal of a practitioner was that he should be an ignoramus in art and a nonentity in politics; that "he should frequent all companies, drink all healths, and be reasonably cool in all religions." Not only have we changed all that, not only are we making our voices heard in public on the sanitary and other questions on which, by sheer weight of knowledge and earnestness, we must ultimately prevail over ignorance and party jobbery, but we actually include among our ranks to-day probably a greater amount of culture extraneous to our duties than can be found among any other body of persons in the world. We have men who are not great artists only because they are greater surgeons; we have some half-dozen speakers whom no one in Parliament or at the bar could excel; we have ripe scholars, graceful writers, learned theologians, adventurous explorers, and the very *élite* of the philosophers who are pushing the work of physical science into the regions of the unknown. With such strength at our command, we need only unity to render it overwhelming for all legitimate purposes; and the generation which is about to enter into our ranks may well be congratulated upon the nature of the brotherhood in which they will be enrolled.

OUR readers' attention has already been directed to the late criminal prosecution of certain members of our pro-

fession at Norwich for sanctioning an experiment upon dogs by a foreign pathologist at the last meeting of the British Medical Association. Two distinct points are presented for our consideration in this matter. There is first the larger and primary one, as to the principles that should govern a man in his conduct towards the lower animals—how far and under what circumstances he is justified, for example, in subjecting them to pain or a painful death, or even death at all; and the other, of insignificant importance as far as the general question is concerned, and involving a matter of method rather than one of principle. To begin with the last. The occurrence at Norwich afforded an opportunity to the Society for the Prevention of Cruelty to Animals for testing the powers of the law to prohibit a practice which they regarded as cruel and unjustifiable, because unnecessary under the circumstances. If it were the object of the prosecution to present their case to the public honestly and impartially, and with a view of trying it on its own merits, all we can say is, they signally failed in giving effect to their intention. The sympathy and honest concurrence of public opinion must, if it is to have any weight, be grounded upon truthful and not false views. We are quite willing to concede that there is room for a difference of opinion between equally conscientious and humane persons in regard to such experiments as those in question. The conviction, had it been secured, would have been very unjust. But this question of vivisection is too large to be circumscribed within the limits of this case, and, difficult as its consideration is, we must discuss it upon the broad principles of humanity and honesty. The exercise of all power involves responsibility, and nowhere should we be more keenly alive to this sense of responsibility than where we exercise the power of inflicting physical pain and suffering.

There are many men for whose characters and opinions we entertain the highest respect, who, while they share to the full our sense of responsibility in this matter, and would probably be in accord with us as to the abstract principles that should regulate our conduct in regard to the lower animals, would still, practically, be at variance with us in their rendering and application of those principles.

First of all, Nature is very red-handed. It scarcely needed the furious indictment which the late JOHN STUART MILL has drawn up against her to render the facts obvious to any observant mind. A substitutionary sacrifice is the law of the organic world: all animals prey upon one another, and the weakest go to the wall; and it requires a strong exercise of faith to hopefully realise the belief expressed by TENNYSON in his "In Memoriam." Then, again, let us but consider for a moment the aggregate of suffering—necessary suffering—involved in the maintenance of our own lives. To that let the suffering be added that man inflicts on the lower animals, which is equally necessary in order to repress redundant life on all sides, and that which is involved in the career of a keen sportsman, some of which undoubtedly is objectless, save so far as it administers to his pleasurable excitement. Then consider the flood of light which experiments on animals have thrown on physiology, surgery, and therapeutics. The two methods by which scientific progress and practical discoveries have been made in these directions have been observation and experiment. To take only a few examples: HARVEY's discovery of the circulation of the blood; HALLER's penetration into the laws of the physiology of the nervous system; MARSHALL HALL's demonstration of the distinction of motor and sensory nerves and reflex actions; HUNTER's operation for the cure of aneurism; WEBER's detection of the inhibitory function of certain nerves; BERNARD's researches on the vaso-motor system of nerves,—the names of these men and the discoveries by which their names are remembered, as well as the whole history of anæsthetics, are associated with the suffering, of some kind or degree, or the death of some of the lower animals. In medico-legal questions, again, even the most fastidious person would admit that experiments on animals were justifiable.

Moreover, the question cannot be properly discussed except by those who possess the physiological knowledge which shall enable them to distinguish between appearances and realities. The inference which would seem indubitable to an ignorant observer of the phenomena witnessed in experimenting on a decapitated turtle or a frog deprived of its cerebral lobes would be utterly wrong, for there is little more evidence that the apparently purposive acts of the latter are attended with consciousness than that a watch is conscious of its own ticking. There is no more spontaneity of movement in the one case than in the other, and the frog which will automatically swim or crawl round the moving hand on which it is placed will no more consume the food placed beneath its nose than the watch will oil its own machinery. Allowing all this, we hold that with which no humane man would disagree—namely, that experiments on animals should not be lightly undertaken, but undertaken with a full and lively sense of responsibility; and that the experimenter should have a clear knowledge of what he is about to do and how to do it, as well as a reasonable conviction that his end in view is the acquirement of knowledge for the relief of man's estate. We are utterly opposed to all repetitions of experiment for the purpose of demonstrating established doctrine, and we need scarcely add that it is our imperative duty to employ anæsthetics wherever practicable. It is beyond this, however, that the ground becomes more unstable and the rule of conduct less defined. Without doubt it is necessary for the experiments of one man to be occasionally repeated by other independent workers to secure reliable results. We hold, however, that a man should consider well, before performing any experiment on the lower animals, whether the results obtained would not prove nugatory so far as their application to man is concerned, from the differences between their respective organisms; for it seems to us a barbarity to expose sentient beings to pain under such circumstances. And, judged by this standard, we much question the value, and therefore the necessity, of some experiments that appear to us to have been open to objections of this character. What we demand, then, is that, if this question of vivisection is to be inquired into with a view to being legislated on, it should be first of all thoroughly and impartially considered; that, whatever be the requirements of science in this respect, they should be explained by those who are best entitled to form an accurate judgment of the matter; and that charges of cruelty should not be indiscriminately urged, or, when urged,

fought out in the petty spirit of a party contest before tribunals whose judgment cannot be accepted as final. If a line of separation between warrantable and unwarrantable experiments can be made, by all means let it be done. Many persons are doubtful, however, whether it would be practicable to legislate on this subject, in consequence of the extreme difficulty of defining the limits of necessary and unnecessary vivisection. A man's conduct in this respect must, they think, be regulated solely by the light of his own conscience. We believe, however, that an attempt might be made to institute something in the way of regulation and supervision. It would not be difficult, for example, to impose such restrictions on the practice of these experiments as would effectually guard against their being undertaken by any but skilled persons for adequate scientific objects. Someone, in whose knowledge, judgment, and character the profession and the public had confidence, might be invested with the requisite authority to inquire into and report upon the aims and methods of such experimenters, whenever and wherever any investigation was necessary.

THE problem of the place at which and the mode in which uric acid is formed in the animal body is one of those points in which pure physiology comes into very close contact with the sphere of practical medicine. The presence of a small quantity of this substance in the blood constitutes in itself one of the commonest and most obstinate maladies with which we have to deal, and to the physiology of the product we must look for the secret of the pathology of the disease.

In tracing, so far as we are able, the chemistry of tissue-change and waste-elimination, the first invariable evidence of the presence of this substance in the normal condition of the system is found in the kidneys, whence it passes into the urine. Its chemical constitution and relation to food point to the disintegration of the albuminous substances as its ultimate source. It is one of the compounds in which nitrogen is eliminated from the body, and stands in more or less close relation to urea, which may possibly be formed from it by a continuation of the process by which it was itself formed. The place and mode of its formation as a definite compound are, however, still unsettled questions in physiology. The main point which investigation has attempted to decide is whether it is formed in the kidney, or whether, being formed elsewhere in the system, it is merely separated by the kidney from the blood which circulates through the vessels of that organ.

Apart from experimental evidence, the latter view must be admitted to possess the greatest *a priori* probability. The chief part of the chemical processes which have uric acid as their ultimate result must take place elsewhere than in the kidney; and it is at least likely that the same portions of the system witness the whole process. The relation of the substance to urea points in the same direction, and no one asserts that urea is formed only in the organs which excrete it. The study of the pathological relations of the substance has given additional weight to the assumption; so that physicians, looking at the influences of systemic change on lithuria and gout, have regarded the theory as proved; and the existence of lithæmia, where it cannot be directly demonstrated, is assumed as sufficiently certain to pass muster among the accepted theories of the day.

This view, however, has not received from experimental investigation so much support as might have been anticipated, and current physiological theory, influenced especially by the experiments of ZALESKY, has inclined to the opposite opinion — that uric acid is formed in the kidney itself. For observations upon the lower animals, those creatures have been selected in which uric acid is relatively much more abundant and important as an excretory product than it is in the mammalia. The investigations have been directed to the determination of the presence of uric acid in the normal blood, and to a comparison of the effects of extirpation of the kidneys and ligature of the ureters in these animals. The latest contribution to the subject is contained in an account of some fresh experiments and a review of previous investigations which Dr. PAWLINOFF has contributed to the current number of VIRCHOW's *Archiv*.

Most attempts to ascertain the presence of uric acid in the normal blood have yielded a negative result. ZALESKY, especially, in his elaborate experiments, failed on each occasion to discover it, and lays much weight on the fact as evidence that it does not exist as such in the blood. MEISSNER, however, destroyed the value of this conclusion by showing that too little blood had been used; and, by taking a larger quantity for his analysis, he proved the existence of uric acid in the normal blood of the fowl. PAWLINOFF has further illustrated the fallacy of the negative conclusion by showing the ease with which a practised observer might miss even a much larger quantity of uric acid than MEISSNER had found; and he succeeded in finding it in the blood of fowls fed upon meat, although he failed to do so in the blood of those fed on bread or barley. SCHERER and STRECKER had previously found uric acid in the blood of oxen. The inference is thus inevitable that in some animals, when there is no apparent hindrance to the excretion of this substance, uric acid is to be found in the blood.

When the ureters of a bird are tied, deposits of uric acid occur in a short time in various situations; and the place and order of these have been carefully studied by PAWLINOFF, as they had previously been by ZALESKY, and, for another purpose, by CHRZONSZCZEWSKY. These deposits occur first in the kidneys, and subsequently in the cells of the connective tissue, in the lymphatic vessels, on the serous membranes, and around the small bloodvessels. Much importance has been attached to the place at which these deposits first appear, as throwing light on their origin; but this significance is doubtful. Certainly their early appearance in the kidneys cannot indicate that uric acid is formed there, because the renal function of separating this substance from the blood would equally explain its accumulation in their textures. Local conditions might determine its precipitation in places in which it was not formed. CHRZONSZCZEWSKY described a diminution of the precipitate in the cells of the connective tissue some time after its deposit—an appearance which would support the view that uric acid is actually formed in them; but this observation has not been corroborated; and PAWLINOFF looked particularly for such an alteration, and failed to see it.

The results of nephrotomy are also inconclusive. Unfortunately this operation cannot be performed on birds in whom the ureters can be so conveniently tied, and therefore no accurate comparison of the results can be made. In snakes, however, the removal of the kidneys has not been followed by general deposits of uric acid, such as occur in birds after ligature of the ureters. A deposit is found in the wound, which ZALESKY thought supported the opinion that the kidneys were the seat of its formation. It is difficult to accept this view, and PAWLINOFF has shown that after ligature of the ureters such a deposit will occur equally in any wound or other inflammatory focus.

Thus the results of nephrotomy throw little light on the significance of the deposits which occur after ligature of the ureters. PAWLINOFF, however, has tied the renal arteries, and has found that these deposits of uric acid occur throughout the body just as they do when the ureters are tied. This is a fact which is obviously of great importance, and, if corroborated, should go far to settle the question in dispute. Ligature of the renal arteries removes the renal function from the vital processes of the organism. If uric acid is found under these circumstances to accumulate in the blood, this may be taken as conclusive proof that it exists already in the blood, and that the function of the kidney is to eliminate and not to form it.

There is but little evidence as to the precise seat of its production, supposing it to be formed elsewhere than in the kidney. Its analogy to urea suggests that the liver, in which probably the chief part of the urea is formed, may also be the chief seat of the formation of uric acid. The results of the experiments we have alluded to hardly support this view, since the liver is not a chief seat of the deposit, and much weight cannot be attached to the conclusions which have been drawn from the experiments on this point.

PAWLINOFF has added to his observations a physical theory of the cause of the separation of uric acid from the renal blood, into which, as it is unsupported by direct evidence, we need not follow him. We may, however, call attention to the curious experiment of CONSTANTINOFFSKY, which he relates as an illustration of the extent to which physical conditions influence, if they do not explain, apparently vital processes. He found that carmine introduced into the blood of a living animal in a certain small quantity passes out only through the vessels of the kidney, appearing in the urine, and only passes through the walls of the vessels in other parts when its percentage has reached a certain quantity. The conditions of the renal circulation, with the physical laws of osmosis, probably explain much of the physiology of the secretion of the urine.

ROME is the healthiest of Italian cities, except Turin, Leghorn, Palermo, and Messina; and this rank it holds in spite of peculiar disadvantages. It stands in the centre of a plain reeking with malaria. It is built on a soil composed of the putrescent débris of its former self, or rather of its former selves—débris which has almost extinguished the Seven Hills by leveling up the intervenient spaces. It is subject to inundations, which sometimes give quite a Venetian look to the riverside streets; and, as if nature needed help in this direction, it used every Sunday in August to flood one of its largest piazze with water, which, when drained off, left a residuum of putrid slime to steam away beneath the sun. Its sanitary arrangements are such as may be expected from a southern people whose inborn uncleanliness is, if not encouraged, at least countenanced, by a Church which attempts the miracle of praying down a pestilence. Even in its efforts to better itself it makes matters worse. Its excavations and building-works bring gangs of labourers to crowd the already overcrowded poorer quarters; while these operations themselves, by upturning the inert soil, disengage noxious gases and produce the *intoxication tellurique*. Yet, with all this, Rome is a healthier city than Milan or Florence, and considerably healthier than Venice, Genoa, and Naples.

There is no reason why Rome should not be healthier still, and be the first of Italian cities, not only in rank, but in salubrity. It has made rapid progress in its sanitary relations—progress begun under the later Popes, and carried on with accelerated speed by the Italian Government. The people no longer worship Cloacina in the market-place. The Piazza Navona has ceased to be artificially flooded every Sunday in August. Intramural sepulture is a thing of the past, and cremation may again become a thing of the present. Streets are being laid out, and dwelling-houses built on sound sanitary principles; while care is generally had that light and ventilation shall be good, and that drainage shall be efficient. The Tiber, when its embankment (or *sistemazione*, as the Romans call it) is completed, will no longer repeat the portents described by HORACE, and turn the Ripetta and the Ghetto into lagoons; while the broad hints these visitations give of the call for personal ablution will, we hope, be at length taken by the inhabitants. Above all, the restoration of the Campagna to its pristine salubrity and fertility is, in spite of the rather pessimist dictum of Signor PARETO, quite within the resources of science. Now that the real cause of its malaria has been demonstrated by COLIN, who has resolved it into a true *intoxication tellurique*, the remedy—cultivation—should no longer be withheld. For a period, the upturning of the soil may intensify the fever that exhales from it, as the construction of THIERS' forts around Paris and the process of canalisation in France produced febrile malaise among the workmen. But this can be but a temporary result, and the Campagna, there is no reason to doubt, will one day reassert its right to the praise bestowed on its air and soil by CICERO.

Bad as is the reputation of Rome for "fever"—a reputation kept up by the annual flight of the wealthier classes to their beloved *villeggiatura*,—the latest sanitary returns represent her as much less black than she is painted. Only 434 deaths during 1873 were due to miasmata, and these occurred mainly in midsummer and among the poorer population. It is infant mortality that swells the Roman death-rate, and from a cause which must disappear with the extinction of foundling hospitals. These institutions encourage over-population, and weaken in parents' breasts that instinctive love of offspring so beneficently provided by nature. Not only so. They enable any mother to deposit her infant within their walls and then hire herself out as a wet-nurse, "trusting," according to Lady AMBERLEY, "to

Fortune's wheel to give her back her own to suckle, though she must follow it pretty quickly if she wish to find it again among the hundreds of muling and puking atoms"—50 per cent. of which die under three months old! After infant mortality come typhoid and ague in the Roman registrar-general's returns as productive of disease and death; but these belong to the purely preventable class, and must diminish and finally disappear with more efficient sanitation. To this consummation many things are pointing. The improved police arrangements, the more enlightened views of public hygiene, the progress of rational medicine, above all the spread of that education which tends to make every citizen the intelligent guardian of his own health,—all are sending in their affluent waters to the main stream of Italian prosperity, which runs its broadening and self-purifying course under the oxygen of a freer heaven.

THE Edinburgh College of Physicians is resolved not to be behind the Universities in readiness to meet any demand that may arise for qualifications in State Medicines. The College, on Nov. 3rd, 1874, appointed a committee to consider the question of granting a certificate or qualification in State Medicine; and the committee has reported very strongly in favour of the College instituting a qualification, to be granted after two examinations, which may be passed either simultaneously or with an interval of twelve months. It is suggested that candidates must be previously registered as possessing a qualification in medicine. For the present they will not be required to attend any special courses of lectures. Six examiners are to be appointed. The following are the subjects of the two examinations recommended by the committee of the College:—*First examination:* (1) Physics; (2) Chemistry; (3) Meteorology. *Second examination:* (1) Epidemiology and Endemiology; (2) Practice of State Medicine; (3) Sanitary Law and Vital Statistics.

The subjects are well selected. The committee urge the College to institute this examination on two grounds: first, that it seems the duty of the College to have regard to the great and rising importance of State Medicine or the science of Public Health, and to use its influence in developing and encouraging it; secondly, that the interests of the College and of other corporations require that they do something to meet the competition of the Universities. It certainly appears, from a copy of the Report of the Committee with which we have been favoured, as if the College, which has adopted the report of its committee, was actuated in this measure at least quite as much by considerations of self-interest as by concern for the interests of the State. This impression is confirmed by the fact that the report says not a word about the addition of these well-chosen subjects to those in which students are examined for the ordinary qualifications. Surely if the hygienic side of medicine has "grown so great" in importance—and it has done so,—the first thing to be aimed at is to secure that a due study of it form a part of the duty of every student, and that his attention to this study be tested in his ordinary examinations.

At present the College does not examine candidates for its licence in questions of hygiene, and the committee does not propose that it should do so. It only proposes to set up a new examining board for granting a separate and distinct qualification. The committee says, prophetically, that ere long a qualification in State Medicine will become necessary for those seeking public-health appointments. We are not quite so sure of this as the College seems to be. At any rate, before this is done, the examining bodies should let all students know that the ordinary qualifications cannot be obtained without proof of some knowledge of the science of Public Health. No practitioner is fit for his duties without the same kind of knowledge as is required in a medical officer of health.

Annotations.

"Ne quid nimis."

COLD COMFORT.

WHEN the thermometer is down very low, and coals are up very high, we seldom fail to find ingenious correspondents in the daily press ventilating their ideas for obviating the inconveniences most of us feel from these inflictions. It is not the first time that Mr. Rawlinson has come forward with the suggestion that we should keep ourselves warm in our rooms by wearing top-coats and extra clothing, instead of making up the fires and shutting out the cold air. He again, in *The Times*, urges this plan, which is supported by his personal experience and that of one or two writers of letters, and protested against by others. We can scarcely consider Mr. Rawlinson's suggestion a serious one, for the simple reason that it is impracticable. It is bad enough to have our limbs fettered by weighty clothing when we are forced to be in the open air, and to carry the same process into our dwellings would be to submit the body to an amount of fatigue, from the mere weight of the garments, which would be quite a serious matter to all except the very robust or very idle. Moreover, we all know how impossible it is for any glove or foot-covering to preserve the amount of warmth necessary for our extremities, and especially for the delicate movements of our fingers. The advice of another correspondent to use a newspaper for a coverlet at night, if not new, is at least, practical. There is no doubt that many persons will sleep quite comfortably under (and, indeed, over some) newspapers.

After all, the course which is instinctive in the matter of warmth is probably the best. Those of us who can afford to keep good fires in our dwellings may very safely do so. No doubt if rooms were built about twice their present height we could much more easily preserve an atmosphere in them which would be at once comfortable and pure. But, practically, the inevitable opening and shutting of doors which go on in an ordinary household suffices, thanks to the rapid diffusion of air, for a fair amount of ventilation. It is, no doubt, an important matter that we should breathe air as little spent as possible, but it must be remembered that the skin occupies a place only second to that of the lungs in ensuring the purity of the blood. From a cold skin there is little or no cutaneous exhalation, and those effete matters which should be carried out by this channel get retained in the system. When the surface is comfortably warm, and the air is dry, as in a well-warmed room, this exhalation is at its greatest vigour, and we can probably, under these circumstances, afford to take into our lungs air which is not absolutely pure. In addition to this, the evaporation of the exhaled fluid serves to carry off a large

amount of caloric, and thus prevents the blood from becoming over-heated.

Amongst certain persons—and the class is rather a numerous one—that which is comfortable is unconsciously considered to be wrong, and objectless self-mortification assumes the character of a virtue. Such persons never wear a top-coat, never have a fire in their bedroom, always shave with cold water, break the ice in their tub of a morning in order to bathe. They are apt to boast of these feats, and to look down upon their weaker fellow-creatures who do not imitate them. There is probably a remnant of old ecclesiastical terrorism in this, a trace of the "hair shirt and no shoes" of the pilgrims, which is singularly out of place at the present day. In the matter of the morning tub alone the absurdity is well shown. Our boasting friends loudly rejoice that they are not as other men are—the season makes no difference to *them* as regards their morning tub. Now granted that the cold water bath is a good thing, it must be remembered that whereas in summer they immerse themselves in water about 20° or 30° cooler than their blood, in winter the difference of temperature may amount, as it has done lately, to no less than 50° or 60° Fahr. To be consistent they should raise the temperature of the bath in winter to that which it has in summer. As they are inconsistent, they suffer very often from muscular rheumatism.

VITAL MATERIAL FOR THE NAVY AND MERCHANT SERVICE.

SOME interesting particulars on this important subject are given in the last report on the Health of the Navy for 1873, compiled by Staff-Surgeon P. W. Rolston, of H.M.S. *Impregnable*. It appears that during the year under consideration 2691 boys were entered for Her Majesty's service afloat, as compared with 2544 in 1872, and 2897 in 1871. Of these 40 came from the Naval School at Greenwich, 114 from the *Warspite*, and 49 from the other schoolships stationed in London, Liverpool, &c. As the Navy standard is high as to physical condition and development, it is considered that the *Warspite* boys have last year, as formerly, sent a large share of recruits. We take as our text this particular school because training-ships are just now being brought very prominently before the mercantile and general public as a means of clearing the streets and gutters, in order to feed the Royal and merchant navies with good vital material. The Marine Society, represented by the *Warspite*, produced the first training-ship in England, and, as we believe, owes much of its success in the production of seaworthy sailors to the careful medical examination undergone by each boy before admission. During the past year, of the volunteers for the Navy who presented themselves from this ship, one in six was rejected—not, as Dr. Rolston observes, a high proportion. The report above quoted also records that "many boys who had been rejected at Somerset House (i.e., for the Navy) have been entered on board the *Warspite*, and, under the influence of good food and exercise, have developed well, and afterwards passed successfully the medical examination for entry into the navy."

In the organisation of all school-ships such as that discussed at the Mansion House on the 18th ult., it will be necessary that those who furnish the funds should insist upon the adoption of a careful physical test as regards each and every boy otherwise eligible for admission. The standard need not be high, not nearly so high, of course, as that used in the Royal services. We may suggest the desirability of adopting some such standard as that officially recommended by the Marine Department of the Board of Trade in the medical inspection of seamen (for rules as to inspection and medical inspectors exist, although no seamen are inspected). If the boys received aboard these training-ships are to be all destined for sea service, it is useless to admit unfortunate youngsters with heart disease, chorea, phthisis, &c. The authorities will do well to look after physique more closely than birth and legitimacy certificates in order to keep their young vital material in good sanitary condition, and so to fulfil some of the most important conditions incident to the successful training of seaworthy sailors.

THE INFLUENCE OF COLD ON THE TENACITY OF IRON.

THE recent accident on the Great Western Railway has raised a question as to whether the coldness of the weather had contributed to the breaking of the iron tire or axle of the wheel by increasing the brittleness of the metal. Different opinions have been expressed on this point, but the prevailing belief appears to be that the proximate cause of the accident must be accounted for in some other way than by ascribing it to the frost. As a general rule the cohesive force in bodies increases as the atoms or molecules of which the bodies are composed are brought into closer proximity to each other, and heat tends to separate the particles of matter, and thus to weaken the cohesion existing between them. In accordance with this well-established law, a lump of ice, in which there is a certain amount of tenacity, loses nearly the whole of this force when it has been converted into water by the agency of heat; and when, by further heating, the water has been converted into steam, the cohesive force is entirely overcome by elasticity operating in the opposite direction. A great number of experiments have been made for the purpose of determining the influence of variations of temperature and other circumstances on the tenacity of the metals, within the range of their solid condition. In 1844 Wertheim published an elaborate paper relating to this subject in the "Annales de Chimie et de Physique," in which he shows that although in most instances the metals increase in tenacity as the temperature decreases, it is not strictly so in the case of iron, the tenacity of which increases with increase of temperature up to 212° Fahr., but beyond that point it follows the general law. The effect thus produced, however, by a reduction of temperature such as occurs in our coldest weather, would probably be almost inappreciable, and would certainly be quite unimportant in comparison with the well-ascertained effects of vibration, friction, and annealing, caused by the heating and slow cooling of the metal. The great tenacity of wrought iron is mainly due to its fibrous texture, which it acquires in the process of rolling adopted in its manufacture; and this fibrous condition may be to some extent destroyed, and the tenacity weakened, by long-continued vibration or friction, and especially by the process of annealing. Yet even these influences to which the wheel-tires and axles of railway carriages must be subjected, have not been found to interfere with the strength required for ensuring safety under ordinary circumstances in railway travelling.

WORK AND LONGEVITY.

MR. GLADSTONE completed his sixty-fifth and Mr. Disraeli his sixty-ninth year within two days of each other, and both anniversaries have found the rival statesmen in full mental, and, to all appearance, in full bodily vigour. The coincidence is a significant one. The sword wearing out the scabbard used to be a favourite image with physicians of the pessimist school when urging the evils of brain-work. The image—a bad one at best—has ceased to pass current now that juster notions of work and its effects on the system have been arrived at. It is demonstrable that exercise of the mind invigorates its bodily receptacle, even when that exercise is carried to an apparently extreme

point. The brain, the reservoir of nervous energy to the rest of the system, increases in volume and vigour by use, just as the arm of the blacksmith or the leg of the *danseuse* gains in muscular development. The general system benefits by the enhanced brain-power, and greater vitality and longevity is the result. This explains the prolonged lives of statesmen like Palmerston or Thiers, lawyers like Brougham or Lyndhurst, soldiers like Wellington, divines like Philpott, or physicians like Neil Arnott or Henry Holland. Men, like Southey or Sir Walter Scott, who die prematurely of softened brain, are the victims, not of work, but of worry; not of continuous and free, but of continuous and impeded, effort. Now this worry and impediment are invariably self-incurred, and invariably avoidable, and their presence is always to be accounted for by some inherent flaw of temperament. Work by method and on system, even when severe, is not only quite compatible with prolonged life, but is actually conducive to it, while the torpor of idleness or the excitement of fitful effort are the sure precursors of senile degeneration. This is a useful doctrine to preach, and still more useful to practise.

THE EVICTED SHAKERS.

WHATEVER we may think of the tenets of this silly sect, it is impossible not to commiserate them under the sad privations which they have undergone, and the exposure to which they have been subjected during the late cruel weather. Of the legal right to evict these people we have no doubt. We only wish we felt as secure of the ground as to the moral right of this measure, which seems to have been an extreme one under the very exceptional state of the weather. A humane man would be loth to turn a cat or a rat out of doors under similar circumstances. As far as we can gather, this community of "Girlingites" was a harmless, quiet community enough: they were simple-minded people, not given to riotous living, and their conduct is said to have been unobjectionable, beyond some eccentricities of dress—quite insignificant, after all, compared with those in which some weak-minded individuals of the extreme ritualistic party are wont to indulge. At any rate, these Shakers had the courage of their opinions. Of the sincerity of their convictions there can be no question; they have undergone an ordeal of frost, if not of fire. That they are a deluded people, the victims of a false enthusiasm and silly superstition we cannot doubt; but they are not altogether singular in this respect, and quite as sincere as some of their betters, who have not the excuse of ignorance and poverty to urge in their favour. They did not pay their debts, and, of course, they had to reap the consequences, although we may be pardoned for wishing that those consequences had come at a more seasonable time. In this respect, at any rate, they were false to their own standard: for the founder of the Christian faith, no less than His earliest followers, inculcated by precept and example respect for laws and the reward of labour. Mrs. Girling, the founder of the sect, like all of her class, was completely dominated by a morbidly excited imagination. She has seen visions and the rest of it; but, apart from this, there is no evidence of her being mad in the usual and ordinary acceptation of the term. And the hypothesis that the influence she exercises over her followers is attributable to some mesmeric power is all moonshine. The history of the world, unhappily, is not without many examples of a similar character. There is a species of moral as well as a physical contagion. What an appeal to the imaginative and emotional faculties of poor and credulous people by an enthusiast and fanatic will effect we all know, from what we can witness any day among equally credulous people who are neither poor, badly dressed, nor in a certain limited sense uneducated. Among the very poor and illiterate there arises a religious enthusiast, who has sympathy with the sins and sufferings of her class; she grounds her claims to their attention and sympathy on some narrow — and the narrower the better, for it is easiest understood—substratum, either in the way of Scriptural support or an appeal to their faith, and the rest follows. Among the richer, more sensitive, and refined classes, appeals are made to the imagination and the emotions by histrionic displays and sensuous impressions, which have the semblance, but none of the reality, of true religion; and the outcome is very much the same, and entitled to even less respect. To a thoughtful-minded physician some of the spectacular forms of worship, now, alas! so fashionable, afford a sad psychological study. The manliness, combined with modesty and humility and charity, the hopeful courage to encounter the sorrows and difficulties of life, so as to discharge one's duties in it with a sense of responsibility while we are yet living above the lives we lead, seem to form no part of much of what takes place in our midst. To be robust we must live wholesome, active lives, and it is the same with our mental and moral faculties. Systems founded on narrow creeds, and maintained by stimulating the emotions and cultivating the æsthetic sense, are at best effeminate and poor substitutes for those large, sound principles which form the mainstay of strong, dutiful lives. Meanwhile, the presence of these Shakers, crowded together in barns, is giving rise to much complication. The sanitary authority has to guard against the outbreak of disease, and those who have extended temporary protection to the unfortunate Shakers seem determined not to "let their people go."

ENTERIC FEVER IN THE NAVY.

DEPUTY INSPECTOR-GENERAL J. L. DONNET, M.D., has furnished notes on this subject, compiled at Haslar Hospital, in the last Report on the Health of the Navy. They relate to cases received from the training-ships *Impregnable* and *St. Vincent*, and H.M.S. *Minotaur*, *Sultan*, and *Northumberland*. Single cases occurred in other ships, producing a total for the home station of thirty-four cases, fourteen of which ended fatally. As regards the training-ships, although the milk and drinking-water were examined, and other inquiries instituted, the cause of the disease was not satisfactorily traced. As regards the ships in commission, which were off Vigo when the disease made its appearance, Dr. Donnet considers it very probable that the outbreak was caused by the water taken from that port, although the analysis of Professor Frankland, to whom three samples were submitted, did not give any evidence of previous sewage or animal contamination.

Staff-Surgeons F. W. Blake, M.D., and L. J. H. Hayne, M.D., supply also some important notes in connexion with the appearance of this disease among the seamen in the Irregular Force. A total of forty-six cases occurred, four of which were invalided and five proved fatal. Sixteen of these occurred in the *Doris* and eighteen in the *Narcissus*. The fever broke out on board both ships while at sea, on the voyage between Madeira and Barbadoes, the first case occurring on the fourteenth day after leaving Vigo, and seven days after leaving Madeira. An analysis of the water on board, which had been supplied at Vigo, showed that it was quite unfit for human consumption. Dr. Hayne, when his ship was at Port Royal, Jamaica, traced an outbreak of diarrhœa among the ward-room officers to the foul water used for drinking purposes, in consequence of the unclean state of one of the tanks and of a sponge filter used in the ward-room. We are specially glad to place these extracts on record, because they show that the Medical Department of the Navy is fully alive to the importance of tracing out accurately the causation of preventable diseases. We commend the foregoing to the attention of port medical officers at home and abroad, and are glad to

find that the sanitary authority of the Port of London is instituting an investigation into the condition and storage of the water used for drinking purposes on board the vessels in its jurisdiction.

THE ARCTIC EXPEDITION.

No appointments of medical men have as yet been made to the ships which are to form the Arctic exploring expedition of the forthcoming spring, but we hope that the Admiralty will not be satisfied with less than two surgeons to each vessel. The plan of the expedition, as sketched out, implies considerable separation of the two ships, and since medical men are but mortal, it might chance that if a single surgeon were appointed, the crews might be left without medical advice for a lengthened period. Sir Alexander Armstrong, having himself served in the Arctic regions, will know the kind of temperament and physique best suited for the climate, and will no doubt have plenty of volunteers for the special service from whom to select the best men.

An ingenious but somewhat impracticable suggestion has, we understand, been made by a member of the Naval Medical Service, with the view of maintaining the temperature of the body under extreme cold. The suggestion is that each individual's *sacrum* should be fitted with a flat spirit-lamp, from which a tube should pass up the spine beneath the clothes to the occiput, so as to maintain the heat of the trunk and its vital organs. We believe the idea has not been reduced to practical experiment, but would suggest to the inventor to try the appliance on his own person, and having done so, to "report progress," though possibly he may not be "left sitting."

THE ARMY MEDICAL SERVICE.

THE year that has just terminated has left the public medical services in an eminently unsatisfactory condition, and the feeling of irritation and discontent among the members of both the naval and military services seems wider and deeper than ever. Of one thing we are quite convinced —viz., that it is perfectly futile for the authorities to expect any change in these respects so long as the grievances of medical officers remain unredressed. It is announced, on the authority of the *Globe*, that Mr. Ward Hunt has been induced to propose to the Treasury certain improvements in the pay and position of naval medical officers, and in that case it seems tolerably certain that Mr. Gathorne Hardy will be compelled to follow suit. No one could deny that the change of system brought about by the late Warrant was, in itself, likely to prove very unpopular; but associated as it was with a curtailment of the privileges of medical officers, and subjecting them as it did to pecuniary loss at the very time that they were charged with extra work and responsibility, it proved a little too much for the back of any camel. Nothing could well have been more ill-advised than the clean sweep which the late Government made of all regimental appointments; and there was no necessity for such an extreme measure, which would never have been adopted in any other branch of the service. However, matters have reached a crisis with the Army Medical Service, and the War Minister will find, in the case of medical recruits, there is no such alternative open to him as that to which the Commander-in-Chief referred when speaking of recruiting generally for the army. "It is nonsense blinking the matter"; and as Mr. Gathorne Hardy cannot compel young medical men to enter the army, he will have to pay them better and treat them better in order to get them. We earnestly hope that the present Government will be prepared with some scheme for putting an end to a state of discontent which is threatening the efficiency of the service.

DR. JAMES STARK.

IT will be remembered that not long since we drew attention to the retirement of Dr. Stark from the post of Medical Superintendent of Statistics in the General Register Office of Scotland, and to a report which had reached us that, upon some technical plea, his right to a superannuation allowance was questioned by the Treasury. We now learn that a pension of £130 a year has been granted to Dr. Stark, from which it appears that his twenty years' devotion of eminently special abilities to the Scottish Registration Department has been rated at a value equivalent to the work done by an average Government clerk. This is encouraging to professional men to devote themselves to the public service, and we strongly advise any of them who may be tempted to enter it to make terms beforehand, or else they may, after a lifetime of hard work, find, as Dr. Stark has done, that equity is not a guiding principle at the Treasury.

REGISTRATION OF BIRTHS AND DEATHS.

THE new Act for the Registration of Births and Deaths in England came into operation yesterday. It affects the profession and the public alike in this, that both are now compelled to do what was before left for the most part upon a voluntary footing. Registered practitioners have, we trust, generally followed the advice we gave them some weeks ago, to take steps for obtaining, through the local registrars, a supply of the new forms of medical certificate, which are specially adapted for use under the compulsory system of certification now in force. Apart, however, from professional considerations, we are all interested in knowing what requirements the new law makes upon us as citizens; and it is important to be clearly understood that on the occurrence of a birth or death, the duty is now imposed, in the first instance upon the relatives of the child or of the deceased, of personally giving information to the registrar, and effecting the registration within specified times, on pain of fine for neglect When it happens that no relatives are available for the purpose, the duty of effecting the registration devolves upon the occupier of the house, or upon some person otherwise qualified to give the requisite particulars. In the case of a birth, the information must be given within forty-two days, and of a death within five days. Registration is gratuitous within those periods, provided the informants go to the office of the registrar; but they may require him to wait upon them at their homes by giving him notice of their wish and paying him a fee of one shilling.

UNHEALTHY HOMES AND INTEMPERANCE.

THERE is no question which demands more serious attention on the part of the Legislature than the improvement of the dwellings of the poor. The evil influences of overcrowding are seen not only in the general deterioration of the *physique* of the population, and the terrible ravages of contagious diseases, but also in the immediate effects on the mental and moral life of the individual. A correspondent of the *Manchester Guardian*, who signs himself "M.D.," has recently called attention to the question of unhealthy dwellings as a cause of intemperance, particularly in women. He argues that they are particularly liable to be led into the habit of dram drinking by the weariness and depression induced by the want of air and light in their homes, added to the cares and troubles of ordinary life. There is no doubt that much of the morning spirit-drinking amongst working men is due to the foul and close atmosphere in which they are compelled to sleep. They rise unrefreshed, feeling stupid and unequal to exertion, and take a dram to quicken their drowsy powers before commencing the day's work. But if it be true that a

similar habit is growing amongst the women, the evil is aggravated tenfold: the home is neglected, the husband finds no comfort there, and seeks solace in the public-house, whilst the wife herself is driven to deeper depths by the desolation she has caused. And if one of the chief causes of this state of affairs be, as seems probable, the unhealthy and crowded rooms in which they live, it is indeed time that steps should be taken to remedy the evil. The College of Physicians could do no better work than to continue the efforts which they made last year to induce Parliament to take up the subject.

THE PATHOLOGICAL AND CLINICAL SOCIETIES.

THE annual election of office-bearers in the Pathological and Clinical Societies will take place next week, when Mr. George D. Pollock will be nominated President of the former, and Sir William Jenner President of the latter Society. Mr. Pollock was formerly Honorary Secretary of the Pathological Society, and a diligent contributor to the earlier volumes of its Transactions, and he will, therefore, bring experience of the working of the Society with him, if a personal knowledge of the more active workers of the Society may be wanting at first. Sir William Jenner has but just completed his two years of office as President of the Pathological Society, and it says a good deal, we think, for his "pluck" that, with the numerous official and private calls upon his time which he must necessarily have, he is willing to take office again for another two years.

The hour of meeting of the Pathological Society has hitherto been 8 P.M., but half-past eight has been found so much more generally convenient both at the Royal Medical and Chirurgical and the Clinical Societies, that we are glad to find the Council of the Pathological proposing a new bye-law by which the alteration in the time of meeting will be carried out.

DOING GOOD BY STEALTH.

A REAL benefactor to the public has just died in Mr. Benj. Attwood, of Cheshunt, who, it turns out, was the anonymous donor of that £10,000 to St. Peter's Hospital, on which we commented at the time, and whose munificence was lavished in those £1000 donations which, appearing in *The Times* as from X. Y. Z. or some other mysteriously initialed person, amounted in the aggregate to £350,000. A better example of "doing good by stealth" could not be adduced, and many a millionaire, we fear, whom popular imagination has credited with this or that series of donations will "blush to find" that for him at least it is no longer "fame." With the doubtful exception of his endowment of St. Peter's Hospital, Mr. Attwood seems to have been as wisely as he was benevolently inspired. To relieve suffering and to provide the means of honourable livelihood are the two best objects of charity; and it will be found that Mr. Attwood gave most to hospitals, which, as asylums for the sick and schools for the physician, seem to combine in themselves the objects referred to. Mr. Attwood's name ought to live; and some memorial, whether in painting or sculpture, or, better still, in a scholarship, should perpetuate the lustre of his example.

THE CIRCULAR NUISANCE.

CAN nothing be done to stop the shower of circulars we are at present deluged with? Every post fills the letter-box with these mendicant documents. Some of them are only a nuisance, and cause merely waste of time in sorting them out from our proper correspondence, and if not promptly consigned to the waste-paper basket, produce endless confusion by getting mixed with other papers that are of real importance. Others, however, are actually mischievous. We allude to the prospectuses of certain companies, plausibly worded and backed by an apparently respectable directorate, many of whom incur no money risk, but lend their names for a consideration. These companies work havoc with the savings, not only of members of our profession, but with those of many who are as trusting as they are ignorant in financial matters. If people would only remember that "good wine needs no bush" they would often save their money and themselves from disappointment. Good things are so scarce and are at such a premium that it is clear that those who are fortunate enough to know of them can find a better market than allotting them to the public at a discount. However, as bitter experience seems to fail with the majority in teaching caution, we hope the Chancellor of the Exchequer will protect the wise from annoyance and the foolish from loss by imposing a good round tax on all such circulars issued from the Stock Exchange. Nothing less than a sixpenny stamp on each circular will be sufficient to stop the flood of these importunate documents.

THE SOHO-SQUARE HOSPITAL FOR WOMEN.

THE authorities of this establishment are advertising for medical officers in place of those they drove away last year. No apology or reparation has been made to those gentlemen, though the committee has acknowledged that it was wrong by making the very alterations demanded as to its own constitution and the tenure of office by its officers. These are now elected permanently up to the age of sixty-five, and the immediate effect of the alteration of the law has been, curiously enough, to place Dr. Protheroe Smith and his son Dr. Heywood Smith permanently at the head of the staff. If any young physician or surgeon should now desire to cast in his lot with the institution, he will have only himself to thank when he is cavalierly treated.

We notice that the Hospital for Women claims to have seventy-two beds. We should like to know how many of these are available at the present moment for occupation, and what proportion the free beds of the charity bear to those in the "paying wing"—to which patients who are perfectly able and willing to remunerate their own attendant are frequently admitted without let or hindrance.

A MELANCHOLY DEATH.

ONE of the most painful incidents in the recent railway accident is the melancholy death of Mr. J. E. Richards, a rising medical practitioner, who resided at South Hackney. The circumstances of his death and of the identification of his remains have already been made known through the medium of the daily press; but only those who knew him can fully realise his loss. In October, 1868, Mr. Richards entered as medical student at University College, where he worked earnestly and diligently, and won the esteem of his fellow-students by his amiability and kindness, and gained the confidence of his teachers by his respectful attention to instruction and by his patient industry. After completing his anatomical, physiological, and chemical studies, he entered upon his duties as a student in the hospital, where he distinguished himself by his regularity and his constant endeavours to gain a sound and thorough knowledge of practical medicine and surgery. In due course he presented himself for examination, and was admitted, in the year 1872, a licentiate of the Royal College of Physicians, a member of the Royal College of Surgeons, and a licentiate of the Society of Apothecaries. Having thus qualified himself for the duties of his profession, Mr. Richards entered upon practice at South Hackney. Success soon attended his labours, and in a very short time he gained the confidence of a large

clientèle, which was rapidly increasing when he was so lamentably cut off. Mr. Richards, on the fatal occasion, was with his adopted brother, Mr. Hughes, barrister, of the Middle Temple, on his way to visit his foster parents. Death is especially sad when it thus violently overtakes a young man in the prime of life and on the threshold of honourable independence.

THE LONDON WEEKLY RETURNS.

WE are gratified to learn that a suggestion which we recently made that the Registrar-General should, in his Weekly Returns, show not only the mortality within the London registration limits, but also in the districts outside and close adjoining that area, is about to be adopted. From the commencement of the new year the deaths will be given every week for all the sub districts, or parts thereof, lying within the Metropolitan Police area; so that there will be a compact population of more than four millions subject to constant observation in respect of its vital statistics. Nowhere else in the world can be found a parallel to this vast community of human beings gathered together upon less than 700 square miles, brought under weekly review as to its growth by natural increase, and as to the influences affecting its health. And it speaks eloquently for the zeal and efficiency of the Registrar-General and his staff that they are able to undertake the collection, analysis, and publication of the necessary facts for these Weekly Returns; especially considering the incredibly short time, less than two days, available between the first receipt of the local returns and the despatch of the complete results to the press.

ARMY RECRUITS.

No one can complain that the Duke of Cambridge, in his recent speech on this subject, did not go straight to the point. His Royal Highness said "it was nonsense blinking the matter." If the nation wanted to have an army of adequate size, and composed of strong, able-bodied soldiers, it must have recourse to one of two things—viz., conscription and obligatory service, or voluntary enlistment with additional pay and advantages to the soldier. It seems to us that this statement implies, first, that the recruits we are getting are not, in the opinion of the Commander-in-Chief, sufficiently numerous or of the right stamp to meet the requirements of the army; and, secondly, it shadows forth a probable demand for more money in the coming estimates for the army. It is evident, too, that there is, at any rate for the present, a great aversion to the introduction of any system of obligatory service, which the Commander-in-Chief deprecates as an unnecessary and expensive method. What the recruiting surgeons have all along been pointing out has now been endorsed by undeniable authority, and John Bull will probably have to contemplate the prospect of putting his hands into his pockets to meet this among his other Christmas bills.

DIPHTHERIA AT WOOLWICH.

FRESH cases of diphtheria are reported to have occurred since the 16th instant, in the huts constituting the married men's quarters on Woolwich-common—three children and one adult. These cases are of milder type, but the continuance of the epidemic, in spite of all sanitary precautions and the removal of many of the families, points only to one conclusion—the entire destruction of the cottages in question, and the erection of fresh and improved dwellings. Nothing will ever render the present tenements habitable, and it is only trifling with the health and comfort of the occupants to delay any longer this much-needed step.

THE MEDICAL DIRECTORY.

THE Medical Directory for 1875 has made its appearance with commendable punctuality, and presents a somewhat novel appearance from having its principal sections indicated on the edges of the closed volume, after the manner of the Post-office Directory. An editorial note furnishes us with the following facts respecting the profession—namely, that during the past year 2423 medical men have changed their addresses, 339 have obtained additional qualifications, nearly 3000 have either received or resigned appointments, the names of 480 appear in the obituary, and those of 839 are inserted in the Directory for the first time. The list of provincial medical officers of health has been elaborated and rendered correct, an acknowledgment being made of the assistance derived from the columns of THE LANCET.

YELLOW FEVER.

ALL practical notes as to the rise and progress of this fatal disease are interesting, and the officers of the Royal Navy are about the only professional individuals who have special opportunities of furnishing them. The penultimate Report on the Health of the Navy gave an account of the outbreak as it appeared in the fleet off Mo[illegible] last report contains particulars compiled by Dr. W. H. Cruice of an outbreak of the [illegible] *Aboukir*, then off Kingston, Jamaica, occurred, twenty of which ended [illegible] that no sort of notice as to the [illegible] Kingston was sent to the navy [illegible] leave had been given to the men [illegible] on unchecked. With regard to [illegible] the surgeon records that of five [illegible] the 5th, three on the 7th, and one [illegible] new arrivals did not suffer more [illegible] Diarrhœa was a frequent symptom at [illegible] the disease, albumen at some stage made [illegible] the urine in every case, and there was always [illegible] temperature between the morning and evening [illegible] as much as two degrees or more. Dr. Cruice could record only the early symptoms, as the patients were removed to hospital as soon as the disease became pronounced.

THE DUKE OF CONNAUGHT.

H.R.H. the Duke of Connaught will leave England on the 9th inst. for a tour in Egypt, thus following the good example of his brothers in seeing something of the world. This tour is one for pleasure, and has no special relation to the Prince's health, which is perfectly good. He will, of course, be accompanied by a medical attendant as a member of his suite, and we have much pleasure in announcing that the Queen has selected Dr. Henry Charles Woods, R.N., at present serving with the division of marines at Deal, for the post. The naval medical service cannot fail to be gratified at the selection of one of its members for this delicate and important duty.

TYPHOID FEVER AT OXFORD.

WE have to record the death, at Oxford, of another undergraduate from typhoid fever. This makes the third death from the same cause among undergraduates within the last month. There can be no doubt that at the present moment Oxford is not a safe place of residence, owing to the imperfect condition of its drainage and impure water-supply. We have already pointed out the best measures to adopt to remedy the present evils. The University authorities will incur grave responsibility if they allow the men to come up without previously seeing that proper precautions are taken to protect them from all chance of infection.

RECENT official reports show that the cultivation of the poppy is greatly on the increase throughout China, the area of growth enlarging every year. By many good judges the inferiority of the opium produced, as compared with the Indian drug, is considered to be absolute, and due to soil and climate. We are told that by native smokers foreign opium is infinitely preferred to their own produce, which is said by them to be deficient in strength, bitter in flavour, and injurious to health. By a portion of the population native-grown opium is credited with the production of dysentery and cutaneous eruptions and ulcers, all of which evil effects are counteracted by the Indian opium. It is strange to read that in one town an unusual amount of opium-smuggling was attributed to the fact, that at the triennial examinations for the degree of master of arts, numbers of students who came from poppy-cultivating districts brought large quantities of opium in their luggage.

AT a late meeting of the Metropolitan Asylums Board, Mr. Shaw-Stewart related a curious story, illustrating the manner in which small-pox may be disseminated. A man who was lately received into the Stockwell Hospital had travelled from the east to Vienna, and when there he felt ill, and had an eruption to which his attention was drawn. He, however, proceeded, *viâ* France, to London, and on arriving at Victoria Station went to a medical practitioner, who thought the eruption proceeded from "cold." The man then went on to Mitcham, when a surgeon informed him he had small-pox. After some negotiations with the sanitary authorities he was taken to the Stockwell Hospital in the middle of the night, where he is now doing well. As the patient had been travelling for certainly over forty hours with developed small-pox, on railways and steam-packets, it would be interesting to approximately learn how many persons he had infected.

THE description of the recent disastrous loss by fire of the ship *Cospatrick* contains some of the most painful and harrowing details that it is possible to present to a civilised community—details that, perhaps, would have been better omitted by the daily papers in their accounts of the calamity. It is difficult to believe that English people under any circumstances whatever should resort to cannibalism. That the unfortunate occupants of one of the boats which escaped from the fated ship did, in a state of semi-madness, induced by extreme thirst aggravated by drinking sea water, commit the revolting act, there seems no reason to doubt. They subsisted "on the flesh and blood of others who died in the boat," says one account, while another states that they cast lots who should die, and then killed and ate the victim.

FOR the last four months scarlatina has prevailed more or less severely in Goole. In all nearly 300 cases of the disease have occurred, of which 40 were fatal. Although, as might be supposed, children suffered principally, adults were by no means exempt. The disease was marked by unusual virulence, often running to a fatal termination within a few hours of the appearance of the symptoms. It is remarkable that the fever is absolutely confined to the town of Goole, not a single case having been reported from the neighbouring villages. Several severe cases of diphtheria have latterly come under notice, one of the first victims being a promising young surgeon, aged thirty, the son of an old and respected practitioner in the town, Mr. W. E. Cass.

A FITTING commentary on the recent vivisection prosecution at Norwich is to be found in the fact that Dr. Magnan was a few days ago rewarded by the French Academy of Science with a grant of £100 sterling, for those very experiments on the effects of alcohol and absinthe in quadrupeds the attempted repetition of which in Norwich drove some worthy people, led away by sentiment, to set the law in motion.

WE congratulate Staff-Surgeon J. P. Boileau, M.D., on having been admitted a Diplomate in State Medicine of the University of Dublin. At the recent examination for the diploma Dr. Boileau obtained first place. Dr. Boileau's name is well known to members of the Army Medical Service in connexion with several excellent papers contributed to the departmental blue-book. The army medical officers have shown that they are not behind their civil brethren in professional attainments, for some of their number have been conspicuously successful in several directions. Surgeon-Major Dr. Porter was one of the successful competitors for the Empress of Germany's prize, and Surgeon Welch gained the Alexandra prize on the Destructive Lung Diseases of the Army.

DR. EVAN PIERCE, J.P., county coroner, and five times mayor of Denbigh, was a few days ago the recipient of an honour which falls to the lot of but very few living men. On the occasion referred to Major West, Lord-Lieutenant of the county of Denbigh, laid the foundation-stone of a column to be erected in Denbigh by public subscription in honour of Dr. Pierce. The column is to be 90 feet high, surmounted by a statue of the doctor, and is to cost about £1000. A procession, consisting of all the influential inhabitants of the place, with the fire brigade, and other public bodies, paraded the town prior to the ceremony, at the conclusion of which a large and distinguished party were entertained at a banquet by Dr. Pierce.

DR. FRANKLAND reports that in the water supplied by the Grand Junction and Lambeth Companies during December living and moving organisms were found. The Chelsea Company's water, however, was still worse, containing as it did abundance of organisms, with fragments of woollen and cotton fabrics, clots of the mycelium of a fungus, and fibres of partially digested or decomposed flesh meat. Dr. Frankland might well say that "the water thus charged with fæcal and other refuse matter was unfit for dietetic purposes, and could not be so used without serious risk to health." We observe that Dr. Hill, medical officer of health for Birmingham, has again drawn attention to the large amount of organic nitrogen found in the water supplied to the town.

WE understand that typhoid fever has been somewhat prevalent of late in the Dublin Garrison. Two officers belonging to the battalion of Foot Guards stationed there have lost their lives from this disease; but one of them, Captain Van de Weyer, a son of the late Belgian Ambassador at the Court of St. James's, whose death has recently been recorded at New Lodge, Windsor, is stated as, in all probability, not having contracted the fever at either Dublin or Windsor. Several cases of enteric fever have occurred at the Dublin Military Prison, but the troops stationed in that city are said to be generally healthy. We have not heard, moreover, of any exceptional prevalence of typhoid fever in the Royal borough of Windsor.

WE are informed that Mr. K. J. Dougall, of Halifax, is coming forward as the medical candidate for the vacant coronership of the district. As consistent advocates of the election of medical men to this important office, we wish Mr. Dougall every success, and trust that his professional brethren in the town will support him in every possible manner.

DR. VANDYKE CARTER is now in the Turkish Archipelego prosecuting his inquiries into the nature and causes of leprosy. It is stated that in Crete there are villages in which every inhabitant is a leper, and where all freely intermarry, and thus perpetuate the loathsome disease.

clientèle, which was rapidly increasing when he was so lamentably cut off. Mr. Richards, on the fatal occasion, was with his adopted brother, Mr. Hughes, barrister, of the Middle Temple, on his way to visit his foster parents. Death is especially sad when it thus violently overtakes a young man in the prime of life and on the threshold of honourable independence.

THE LONDON WEEKLY RETURNS.

WE are gratified to learn that a suggestion which we recently made that the Registrar-General should, in his Weekly Returns, show not only the mortality within the London registration limits, but also in the districts outside and close adjoining that area, is about to be adopted. From the commencement of the new year the deaths will be given every week for all the sub districts, or parts thereof, lying within the Metropolitan Police area; so that there will be a compact population of more than four millions subject to constant observation in respect of its vital statistics. Nowhere else in the world can be found a parallel to this vast community of human beings gathered together upon less than 700 square miles, brought under weekly review as to its growth by natural increase, and as to the influences affecting its health. And it speaks eloquently for the zeal and efficiency of the Registrar-General and his staff that they are able to undertake the collection, analysis, and publication of the necessary facts for these Weekly Returns; especially considering the incredibly short time, less than two days, available between the first receipt of the local returns and the despatch of the complete results to the press.

ARMY RECRUITS.

No one can complain that the Duke of Cambridge, in his recent speech on this subject, did not go straight to the point. His Royal Highness said "it was nonsense blinking the matter." If the nation wanted to have an army of adequate size, and composed of strong, able-bodied soldiers, it must have recourse to one of two things—viz., conscription and obligatory service, or voluntary enlistment with additional pay and advantages to the soldier. It seems to us that this statement implies, first, that the recruits we are getting are not, in the opinion of the Commander-in-Chief, sufficiently numerous or of the right stamp to meet the requirements of the army; and, secondly, it shadows forth a probable demand for more money in the coming estimates for the army. It is evident, too, that there is, at any rate for the present, a great aversion to the introduction of any system of obligatory service, which the Commander-in-Chief deprecates as an unnecessary and expensive method. What the recruiting surgeons have all along been pointing out has now been endorsed by undeniable authority, and John Bull will probably have to contemplate the prospect of putting his hands into his pockets to meet this among his other Christmas bills.

DIPHTHERIA AT WOOLWICH.

FRESH cases of diphtheria are reported to have occurred since the 16th instant, in the huts constituting the married men's quarters on Woolwich-common—three children and one adult. These cases are of milder type, but the continuance of the epidemic, in spite of all sanitary precautions and the removal of many of the families, points only to one conclusion—the entire destruction of the cottages in question, and the erection of fresh and improved dwellings. Nothing will ever render the present tenements habitable, and it is only trifling with the health and comfort of the occupants to delay any longer this much-needed step.

THE MEDICAL DIRECTORY.

THE Medical Directory for 1875 has made its appearance with commendable punctuality, and presents a somewhat novel appearance from having its principal sections indicated on the edges of the closed volume, after the manner of the Post-office Directory. An editorial note furnishes us with the following facts respecting the profession—namely, that during the past year 2423 medical men have changed their addresses, 339 have obtained additional qualifications, nearly 3000 have either received or resigned appointments, the names of 480 appear in the obituary, and those of 839 are inserted in the Directory for the first time. The list of provincial medical officers of health has been elaborated and rendered correct, an acknowledgment being made of the assistance derived from the columns of THE LANCET.

YELLOW FEVER.

ALL practical notes as to the rise and progress of this fatal disease are interesting, and the officers of the Royal Navy are about the only professional individuals who have special opportunities of furnishing them. The penultimate Report on the Health of the Navy gave an account of an outbreak as it appeared in the fleet off Monte Video, and the last report contains particulars compiled by Staff-Surgeon W. H. Cruice of an outbreak of the fever on board H.M.S. *Aboukir*, then off Kingston, Jamaica. Thirty-three cases occurred, twenty of which ended fatally, and it appears that no sort of notice as to the existence of the malady in Kingston was sent to the naval authorities until after leave had been given to the men, and so the disease filtered on unchecked. With regard to the period of incubation, the surgeon records that of five cases one was taken ill on the 5th, three on the 7th, and one on the 9th day. The new arrivals did not suffer more than the older residents. Diarrhœa was a frequent symptom at the commencement of the disease, albumen at some stage made its appearance in the urine in every case, and there was always a difference of temperature between the morning and evening, sometimes as much as two degrees or more. Dr. Cruice could record only the early symptoms, as the patients were removed to hospital as soon as the disease became pronounced.

THE DUKE OF CONNAUGHT.

H.R.H. the Duke of Connaught will leave England on the 9th inst. for a tour in Egypt, thus following the good example of his brothers in seeing something of the world. This tour is one for pleasure, and has no special relation to the Prince's health, which is perfectly good. He will, of course, be accompanied by a medical attendant as a member of his suite, and we have much pleasure in announcing that the Queen has selected Dr. Henry Charles Woods, R.N., at present serving with the division of marines at Deal, for the post. The naval medical service cannot fail to be gratified at the selection of one of its members for this delicate and important duty.

TYPHOID FEVER AT OXFORD.

WE have to record the death, at Oxford, of another undergraduate from typhoid fever. This makes the third death from the same cause among undergraduates within the last month. There can be no doubt that at the present moment Oxford is not a safe place of residence, owing to the imperfect condition of its drainage and impure water-supply. We have already pointed out the best measures to adopt to remedy the present evils. The University authorities will incur grave responsibility if they allow the men to come up without previously seeing that proper precautions are taken to protect them from all chance of infection.

RECENT official reports show that the cultivation of the poppy is greatly on the increase throughout China, the area of growth enlarging every year. By many good judges the inferiority of the opium produced, as compared with the Indian drug, is considered to be absolute, and due to soil and climate. We are told that by native smokers foreign opium is infinitely preferred to their own produce, which is said by them to be deficient in strength, bitter in flavour, and injurious to health. By a portion of the population native-grown opium is credited with the production of dysentery and cutaneous eruptions and ulcers, all of which evil effects are counteracted by the Indian opium. It is strange to read that in one town an unusual amount of opium-smuggling was attributed to the fact, that at the triennial examinations for the degree of master of arts, numbers of students who came from poppy-cultivating districts brought large quantities of opium in their luggage.

AT a late meeting of the Metropolitan Asylums Board, Mr. Shaw-Stewart related a curious story, illustrating the manner in which small-pox may be disseminated. A man who was lately received into the Stockwell Hospital had travelled from the east to Vienna, and when there he felt ill, and had an eruption to which his attention was drawn. He, however, proceeded, *viâ* France, to London, and on arriving at Victoria Station went to a medical practitioner, who thought the eruption proceeded from "cold." The man then went on to Mitcham, when a surgeon informed him he had small-pox. After some negotiations with the sanitary authorities he was taken to the Stockwell Hospital in the middle of the night, where he is now doing well. As the patient had been travelling for certainly over forty hours with developed small-pox, on railways and steam-packets, it would be interesting to approximately learn how many persons he had infected.

THE description of the recent disastrous loss by fire of the ship *Cospatrick* contains some of the most painful and harrowing details that it is possible to present to a civilised community—details that, perhaps, would have been better omitted by the daily papers in their accounts of the calamity. It is difficult to believe that English people under any circumstances whatever should resort to cannibalism. That the unfortunate occupants of one of the boats which escaped from the fated ship did, in a state of semi-madness, induced by extreme thirst aggravated by drinking sea water, commit the revolting act, there seems no reason to doubt. They subsisted "on the flesh and blood of others who died in the boat," says one account, while another states that they cast lots who should die, and then killed and ate the victim.

FOR the last four months scarlatina has prevailed more or less severely in Goole. In all nearly 300 cases of the disease have occurred, of which 40 were fatal. Although, as might be supposed, children suffered principally, adults were by no means exempt. The disease was marked by unusual virulence, often running to a fatal termination within a few hours of the appearance of the symptoms. It is remarkable that the fever is absolutely confined to the town of Goole, not a single case having been reported from the neighbouring villages. Several severe cases of diphtheria have latterly come under notice, one of the first victims being a promising young surgeon, aged thirty, the son of an old and respected practitioner in the town, Mr. W. E. Cass.

A FITTING commentary on the recent vivisection prosecution at Norwich is to be found in the fact that Dr. Magnan was a few days ago rewarded by the French Academy of Science with a grant of £100 sterling, for those very experiments on the effects of alcohol and absinthe in quadrupeds the attempted repetition of which in Norwich drove some worthy people, led away by sentiment, to set the law in motion.

WE congratulate Staff-Surgeon J. P. Boileau, M.D., on having been admitted a Diplomate in State Medicine of the University of Dublin. At the recent examination for the diploma Dr. Boileau obtained first place. Dr. Boileau's name is well known to members of the Army Medical Service in connexion with several excellent papers contributed to the departmental blue-book. The army medical officers have shown that they are not behind their civil brethren in professional attainments, for some of their number have been conspicuously successful in several directions. Surgeon-Major Dr. Porter was one of the successful competitors for the Empress of Germany's prize, and Surgeon Welch gained the Alexandra prize on the Destructive Lung Diseases of the Army.

DR. EVAN PIERCE, J.P., county coroner, and five times mayor of Denbigh, was a few days ago the recipient of an honour which falls to the lot of but very few living men. On the occasion referred to Major West, Lord-Lieutenant of the county of Denbigh, laid the foundation-stone of a column to be erected in Denbigh by public subscription in honour of Dr. Pierce. The column is to be 90 feet high, surmounted by a statue of the doctor, and is to cost about £1000. A procession, consisting of all the influential inhabitants of the place, with the fire brigade, and other public bodies, paraded the town prior to the ceremony, at the conclusion of which a large and distinguished party were entertained at a banquet by Dr. Pierce.

DR. FRANKLAND reports that in the water supplied by the Grand Junction and Lambeth Companies during December living and moving organisms were found. The Chelsea Company's water, however, was still worse, containing as it did abundance of organisms, with fragments of woollen and cotton fabrics, clots of the mycelium of a fungus, and fibres of partially digested or decomposed flesh meat. Dr. Frankland might well say that "the water thus charged with fæcal and other refuse matter was unfit for dietetic purposes, and could not be so used without serious risk to health." We observe that Dr. Hill, medical officer of health for Birmingham, has again drawn attention to the large amount of organic nitrogen found in the water supplied to the town.

WE understand that typhoid fever has been somewhat prevalent of late in the Dublin Garrison. Two officers belonging to the battalion of Foot Guards stationed there have lost their lives from this disease; but one of them, Captain Van de Weyer, a son of the late Belgian Ambassador at the Court of St. James's, whose death has recently been recorded at New Lodge, Windsor, is stated as, in all probability, not having contracted the fever at either Dublin or Windsor. Several cases of enteric fever have occurred at the Dublin Military Prison, but the troops stationed in that city are said to be generally healthy. We have not heard, moreover, of any exceptional prevalence of typhoid fever in the Royal borough of Windsor.

WE are informed that Mr. K. J. Dougall, of Halifax, is coming forward as the medical candidate for the vacant coronership of the district. As consistent advocates of the election of medical men to this important office, we wish Mr. Dougall every success, and trust that his professional brethren in the town will support him in every possible manner.

DR. VANDYKE CARTER is now in the Turkish Archipelego prosecuting his inquiries into the nature and causes of leprosy. It is stated that in Crete there are villages in which every inhabitant is a leper, and where all freely intermarry, and thus perpetuate the loathsome disease.

A REPORT of the operation of the Glasgow Maternity Hospital during the past year shows that 1291 women availed themselves of the benefits of the institution. There was no occurrence of septic or epidemic disease in the hospital; a result no doubt due to the systematic and complete ventilation of the building, and the thorough cleanliness enforced. As a school of instruction in practical obstetrics the advantages offered have been largely sought by medical students and women training for midwives and monthly nurses. We wish the hospital every success in its good work.

MR. MAURICE GRANT, Chairman of the Permanent Committee of Residents at Hampstead, who oppose the erection of a fever hospital in the district, has written to the papers complaining, *inter alia*, that whereas they expected to find the Local Government Board a court of appeal in the matter, they found it merely an advocate for the Asylums Board. The Committee intend to ask Parliament to prohibit (by an amended Act) the erection of hospitals for contagious or infectious diseases within a certain distance of inhabited houses.

WE would remind our readers that the Factory Act, passed last session for the improvement of the health of women, young persons, and children employed in the manufactories, and for ameliorating their condition generally, will come into force this day (Friday). Among other salutary injunctions the new law enjoins that two hours each day (save on Saturday) shall be allowed for meals, and strictly prohibits any work during the time set apart for meals.

A NEW YORK paper reports the outbreak of cholera among the coolie passengers of the English ship *Forfarshire* while on her voyage from Calcutta to the former port. The ship had 510 coolies on board, of whom 52 died from the disease, and were thrown into the sea. The engineer employed on board also died, while the apothecary and mate, although severely attacked, recovered. As the cholera abated in virulence measles broke out extensively among the children.

THE public meeting for making the arrangements for the Metropolitan Hospital Sunday collection in 1875 will be held at the Mansion House on Monday, at 2.30 P.M. The committee lately appointed will then report on the questions referred to it, and it may be hoped that some further progress may be made in the coming year towards more accurately defining the principles of distribution.

THE *Daily News* states that the forthcoming number of the *Quarterly Review* will contain an article on Mr. Greville's "Journal of the Reigns of George IV. and William IV.," authoritatively correcting some of the personal and political misstatements of the diarist.

THE mortality in London last week amounted to 1646 deaths, including 2 from small-pox, 9 from measles, 65 from scarlet fever, 12 from diphtheria, 38 from whooping-cough, 33 from different forms of fever, 6 from diarrhœa, and 685 from diseases of the respiratory organs and phthisis.

THERE has been a rich crop of inquests within the last few days. We understand that on Tuesday Mr. Humphreys, the Coroner, held no less than 22 inquests, and this, it should be stated, without adjourning a single inquiry. Truly the ancient office in these evil times is anything but a sinecure.

WE learn from a daily paper that the mortality in Glasgow last week reached the enormously high figure of 50 per 1000. The frost and fog carried off a very large number of the infirm poor.

THE INJURIES RECEIVED AT THE OXFORD ACCIDENT.

THE following account is given by the special reporter of THE LANCET:—

Early in the afternoon of Thursday, the 24th ult., the inhabitants of the venerable city of Oxford were thrown into a state of excitement and alarm by the report that a terrible accident had just occurred on the Great Western Railway at Shipton, about seven miles from Oxford. The report was speedily confirmed, and a messenger was at once dispatched to the Radcliffe Infirmary to request the house-surgeon and the matron to make preparations to receive a large number of men, women, and children who had been seriously injured. Though the notice was short, and the available resources of the infirmary were severely tried, the arrangements were admirably carried out, and by the time the patients arrived, everything calculated to minister to the relief or the comfort of the wounded persons was in readiness. In the meantime, large numbers of the medical men from Oxford and the neighbouring districts hastened to the scene of the accident to render what services they could to the dying and the injured. But when they arrived they found that much had already been accomplished. Fortunately, Mr. Mallam, of Oxford, happened to be visiting one of his patients near to where the accident occurred, and hearing loud shrieks and crying, went to the spot whence they proceeded, and found the dreadful cause. With what assistance he could obtain from the neighbouring people he manfully strove for nearly two hours to relieve and support his distressed fellow-creatures, so that when his *confrères* arrived he had already benefited many of the sufferers. To the intelligence and care shown by Mr. Mallam under the exceedingly difficult and trying circumstances, many passengers undoubtedly owe their lives. But, unfortunately a large number were, from the first, beyond the power of medical aid and skill, for thirty persons were killed outright or died within a very short time.

With as little delay as possible the injured persons were sent into the station and to the Infirmary at Oxford. The scene at the station was sickening, but amidst all the confusion and the distress the activity and the kindness of the medical men were strikingly apparent. Dr. Mayo, Fellow of New College, with great kindness and consideration, sent four of the injured persons to his college, where, under his care, two have happily recovered, and the remaining two are progressing favourably considering the serious nature of their injuries. Those persons who were not very seriously hurt or who were evidently in affluent circumstances were sent to the various hotels and attended by the private practitioners.

Meanwhile, noble work was being done at the Infirmary. In the brief space of time which elapsed between the first intimation of the accident and the arrival of the first patients Miss Clarributt, the excellent matron had done almos wonders, and by the magnitude and preciseness o her preparations had astonished even those well conversant with the workings of the Radcliffe Infirmary. Fresh beds were put up, blankets made warm, large quantities of hot beef-tea prepared, an extra ward extemporised by fitting-up the board-room, and everything was carried out as completely as if the warning had been given the day before. But nothing was done unnecessarily, for when the patients arrived their condition was wretched in the extreme. Many were profoundly comatose, while all were benumbed with cold, their clothes stiff and frozen, and their limbs fixed and rigid, and some were wellnigh pulseless and almost dead.

Every effort was made by the matron and the nurses to

warm and revive the patients by means of hot blankets and frictions and by the internal administration of hot beef-tea, while Mr. Morgan, the house-surgeon, assisted by many of the medical practitioners of the town, was busily engaged dressing the wounds of the patients, and binding up their broken limbs. The sudden and almost unexpected arrival of fifty-two seriously injured patients made Mr. Morgan's duty a most arduous one, but he performed it in a manner which reflects on him the highest credit, and for which he deserves the thanks of the community. In his labours he was soon assisted and encouraged by his chief, Mr. Symonds, who had hitherto been working hard at the scene of the calamity.

Of the patients some were merely shaken, but many were dangerously injured. Nearly all were, on admission, suffering from shock, and a large number had sustained fractures of bone, which in five instances were compound. There were many cases of broken ribs, and in two or three instances there was evidence of injury to the lungs. There were also two or three cases in which the base of the skull appeared to have been fractured. Scarcely one person had escaped without severe laceration in some part of the body. A young woman, aged twenty, was admitted in a state of coma, with bleeding from the left ear, and with fracture of the left radius and ulna. Although she subsequently recovered consciousness, she was very restless, and had well-marked paralysis on the left side of the face. She remained in a critical state for several days, and died on Thursday morning last. In another case a little girl, aged five, was admitted in a cold, collapsed, and almost pulseless condition. She vomited excessively, but there was no bleeding from the ear. Both pupils were dilated, and the respiration was diaphragmatic. The child has not even yet recovered consciousness, and very little hope is entertained of her life. There were some other cases which presented evidence of serious head injury. A man, aged twenty, was very drowsy and semi-conscious, and he could be roused only by loud shouting. There is now severe palpebral and subconjunctival ecchymosis, indicative of severe injury about the base of the skull. Another man was comatose for three days, but he is now conscious, although restless and a little excited. There were, as just stated, five cases of compound fracture or dislocation. A woman, aged about thirty, sustained a compound fracture of the right radius and ulna, and an extensive and deep laceration down the left side of the neck. Another woman suffered compound fracture of the left tibia and fibula of the right femur. In the third case a young man was admitted with compound fracture of the left radius and ulna, and a large laceration of the scalp. Another man had sustained compound fracture of the left radius and ulna, and extensive grazing and bruising of the whole limb and face. Another man had compound fracture of the right ankle-joint, with severe bruising of the limb. Amputation seemed at first necessary in this case, but after a consultation of the hospital surgeons, it was determined to attempt to save the limb. All the compound fractures were treated in a simple manner, by means of splints and wet lint, and all the patients up to the present time have done tolerably well. Amputation was necessary in only one case. In this instance the arm below the elbow-joint had been crushed or torn off, leaving the heads of the radius and ulna attached. The lower end of the humerus was removed, and the stump trimmed up. Notwithstanding a tremendous scalp-wound and some sloughing of the flaps, the patient is doing fairly well. One man, about forty years of age, sustained fracture of the pelvis and of the left femur, with severe bruising of the right thigh and leg, and was at first unconscious. There was, however, no evidence of any injury to the pelvic viscera, and the patient is now much better. A woman about thirty years of age was severely bruised about the legs and back, and received a wound in the popliteal space, from falling down the embankment. Already three persons have died since admission, and it is to be feared that with such injuries as we have enumerated, the mortality will be still higher. Of the patients who survive many, we fear, will be incapacitated from following any employment or from gaining their livelihood by the injuries they have received; and, in many cases where life is not in immediate danger, it may be jeopardised during the long course of suppuration that must necessarily supervene.

THE MIDDLESEX HOSPITAL.

THE yearly reports of the Medical and Surgical Registrars of this institution have recently been issued. They are highly interesting, and abound with valuable clinical and pathological observations. The reports are preceded by the description of a case of epithelioma of the mouth and tongue by Mr. Henry Morris, and which illustrates many important points in connexion with cancer of that region. This is followed by a table of the cases of acute and subacute rheumatism, 157 of which were under treatment during the year. It was found that 31 or 20 per cent. of their patients had a family history of rheumatism, while in 17 cases there was a history of phthisis. Of the total number of cases discharged (143) 64 presented undoubted evidence of cardiac valvular disease in the presence of murmurs. There was evidence of mitral regurgitation in 46, of mitral obstruction in 6, of aortic regurgitation and obstruction in 5, and of combined mitral and aortic disease in 7 of the patients. The treatment of the disease was the old stereotyped one. In about one-half of the cases alkalies, chiefly in the form of the bicarbonate of potash, were freely given, the remainder being treated with the tincture of the perchloride of iron and iodide of potassium. No deductions are made from these respective curative measures.

The table of enteric fever is an instructive one. Seventy-five of such cases were admitted, of whom 57 recovered, and 9 died. The average number of days that each case remained in the hospital was 44·2. It was observed that the mortality in the first six months of the year greatly exceeded that of the later period. Of those in whom the eruption developed after admission the spots appeared at dates varying from the third day to the third week. The date of appearance of the last crop of spots was noted in 42 cases to be generally between the 10th and 20th day. In two cases only was the temperature above 107°; in one of them it reached just before death 108·4°, while in the other, after having reached 107·3°, it was reduced to below normal by the cold bath, the patient eventually recovering. Diarrhœa occurred in 35 cases; constipation, throughout, in 23; peritonitis in 5 (with fatal perforation in 3); bronchitis in 41; and albuminuria in 5 cases. In one patient the pyrexia was maintained at a high level for 5 weeks without any intestinal mischief: death took place from suppurating mediastinal glands. In the cancer department it does not appear that any new method of treatment was adopted. Carbolic acid, chloride of zinc and sulphurous acid lotions are used to sponge out recent wounds as heretofore. Under the table of infectious diseases we find that 26 such cases originated in the surgical wards. We cannot conclude this notice without a word of praise to the registrars for the care shown in the collection of their reports.

THE SOCIETY OF PUBLIC ANALYSTS.

IN the early part of last August, after the publication of the report of the Select Committee of the House of Commons on the Adulteration Act, an association was formed, consisting, in the first instance, of official public analysts, but with power to admit into the association other analytical chemists of established reputation, and having for its objects—

1. To promote and maintain the efficiency of the laws relating to adulteration.

2. To promote, and, as far as possible, to secure the appointment of competent public analysts.

3. To improve the processes for the detection and quantitative estimation of adulterations, and to secure uniformity in the statement of the results by holding periodical meetings for the reading and discussion of original papers on chemical and microscopical analysis, especially with reference to the detection of adulteration.

This association, under the name of the Society of Public Analysts, is now fully organised, and we are glad to find that Professor Redwood has been elected its first president, with Hassall and Wanklyn as vice-presidents, Dr. Stevenson as treasurer, and Messrs. Heisch and Wigner as secretaries. With these experienced analysts at the head of the Society, we have no doubt that much good will result from the association, which already includes the greater part of those officially appointed as analysts throughout the country. One of the first duties the Society has undertaken has been to draw up a definition of adulteration, or, rather, to attempt to indicate what adulterated articles of food, drink, and drugs are. It does not appear, however, that the committee who undertook the task has been very successful, and the proposed definition, which failed to satisfy the president and several of the members, has been referred to the council for further consideration and amendment.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

SOME of the descendants of William and Samuel Tuke (the former of whom proposed the establishment of the York Retreat of 1792, and the latter wrote the "Description" of the humane system of treatment commenced there) having placed at the disposal of the Medico-Psychological Association the sum of one hundred guineas, the Association offers a prize of this amount for "the best series of original cases and commentary, illustrative of the somatic etiology of various forms of insanity, accompanied, when possible, in fatal cases, by reports of post-mortem examinations and microscopical preparations—their bearing on the symptoms being pointed out." Cases not seen by the writer may be cited, but must be distinguished from those actually witnessed by himself.

The W. and S. Tuke Prize is open to all without restriction as to country, profession, &c., but the right is reserved to withhold it, should there be no essay of sufficient merit. Essays, to be written in English, and not in the author's handwriting, to be sent with a sealed envelope, bearing the motto of the essay, and containing the name of the writer, to Dr. Rhys Williams, Bethlem Hospital, London, not later than June 30th, 1876. The microscopical preparations, but not the essay, to belong to the Association.

THE DANGER OF ANÆSTHETICS.

To the Editor of THE LANCET.

SIR,—The danger of chloroform and comparative safety of ether have been fitly brought to notice by Mr. George Pollock's letter in THE LANCET of last week.

I quite agree with him in regarding ether as much less dangerous than chloroform as they are generally given; for although I feel as confident in giving a proportion of thirty-three minims of chloroform to a thousand inches of air, as I should in giving ether, I have seldom given a stronger dose without noticing that it caused too much depression of the heart's action. Even this proportion, if inhaled by several deep inspirations, is liable to cause such depression, that if the pulse were not kept under observation, and the chloroform removed or diminished, it might, I believe, cause death. It is, I think, greatly to the credit of the profession that deaths from chloroform are not more frequent, for besides its liability to cause choking and apnœa, which are remediable, it may produce total arrest of the heart's action, which is not so.

The mixture termed "bichloride of methylene" is never sold without containing a considerable quantity of chloroform, and as it is much less volatile than the other ingredients, it escapes less readily. A bottle not very well stopped, or frequently opened, will contain an increasing proportion of chloroform. A flannel used for several patients without being dried will have a larger proportion of chloroform than at first. Mixtures of ether and chloroform would long since have been favourite anæsthetics but for this circumstance. It is obvious to all that we cannot safely give strong chloroform vapour as we can ether, and therefore the larger the quantity of chloroform in the mixture the greater the need of caution.

I am not aware of the evidence that "methylene bichloride" is safer than chloroform. Considering that chloroform is found in almost every surgery and druggist's shop in the country, and that the methylene is both expensive and, on account of its volatility, a great deal wasted, I think the number of patients who have inhaled it must be very small compared with those that have taken chloroform.

Ether is so much less liable to arrest the movement of the heart, that if there were not some serious objection to its use, chloroform would not have been so quickly established in its place. The excitement of a small quantity—the choking produced by its free use, and the subsequent intoxication are the chief reasons against it. These may be almost entirely got rid of by improved methods of administration. I have tried many ways of giving ether, but have always found more resistance to breathing it than chloroform until I made use of nitrous oxide to render the patient partially unconscious, and to assist the action of the ether.

Of nitrous oxide I think it may be said that it is the most pleasant of our anæsthetics, that although it destroys animal life, it always stops the breathing some time before it stops the heart, and that if the chest is moved enough to admit a very little air into the lungs, natural breathing returns more quickly than when it ceases from other causes. It is very rapid in its action, especially on children, and for tenotomy, reducing dislocations, moving stiff joints, and extracting teeth, it is unequalled. But it is not fitted for operations that require that the patient should be still for five minutes. Convulsive twitchings and delirium of a boisterous character are apt to occur. The combination of gas with ether modifies beneficially the character of both.

My first plan was to give gas as usual, and when insensibility occurred, to apply the ether inhaler. It sometimes answered well; at others it produced much choking, or else allowed the patient to recover partially and struggle. My next plan was to turn the current of gas, and make it pass through a vessel of ether as soon as the patient was made unconscious by pure gas. This succeeded better so far as getting the first supply of ether into the system, but after it became necessary to admit air, I could not supply the bag with ether with sufficient accuracy. It answered well for increasing the anæsthesia of gas when a long dental operation had to be performed, but for surgical operations generally it was not satisfactory.

The plan I now adopt is this: I give nitrous oxide only, at first, and by degrees; without removing the face-piece, I turn a stop-cock, which allows a portion of gas, during expiration, to pass through a vessel containing ether, into an india-rubber bag, exactly like the supplemental bag: at the next inspiration this gas returns, bringing with it a portion of ether vapour, and mixes with the pure gas coming from the gas-bag. As the way to the ether is opened, the way to the gas-bag is closed. As soon as the ether begins to be supplied the tap of the gas-bottle may be screwed tightly, and the escape-valve closed.

In turning on the supply of ether, I watch for signs of its irritating the throat, and if it excites coughing or swallowing, I turn back the ether, to lessen its pungency.

The patient is usually ready for the operator in sixty seconds; if any air gets between the face-piece it may require two or three minutes. As soon as the least stertor is heard, or any convulsive twitchings of the limbs is visible, I cautiously admit a little air, and keep supplying as much ether as I can without exciting cough. After about two minutes I remove the face-piece every fifth or sixth inspiration, unless, on account of air getting under the face-piece, the patient remains in a satisfactory state of coma without it. After a certain amount of ether has been taken, the inhaler may be held so lightly as to admit a considerable quantity of air under the face-piece, but it is not often well to remove the inhaler altogether till the end of the operation.

On recovery, although there is usually some excitement, and occasionally hysterical symptoms, they pass away the sooner because there is less ether in the body to be thrown off.

I rarely notice the tracheal rhonchus which is common

when etherisation is kept up for as long as a quarter of an hour in the usual way. The instrument was made by Mayer and Meltzer.

Those who have the gas inhaler with supplemental bag, which I introduced six years ago, will find a substitute for this apparatus by merely putting several pieces of sponge into the supplemental bag and pouring two or three ounces of ether into them. The material of this bag should be etherised india-rubber. Of course, it must be so arranged that liquid ether cannot be drawn into the face-piece.

There are few operations that this instrument is not suited for, where the head of the patient is in such a position that the nose and mouth can be covered over by the face-piece. In some delicate operations upon the eye I should still prefer chloroform, as it causes less bleeding, and in operations about the mouth and nose I should give ether freely at first, and then give chloroform during the operation, if it was one of long duration. The best way of giving chloroform in these difficult cases is beyond the scope of the present letter.

I have given ether after gas in more than 900 cases, and in more than 700 I have used this apparatus. The majority have been dental cases too prolonged for the use of gas alone, but they include all the most severe surgical operations, and some of suspected fatty degeneration of the heart. No death occurred. I have not wanted to draw forward the tongue.

I resorted to artificial respiration twice: in one of these cases sickness followed, but the other recovered better than from a full dose of chloroform. I have also compressed the sternum with one hand on three or four occasions, when I thought the breathing ineffective. Vomiting is rare, unless when food has been taken within four or five hours. When it has happened it has been in no instance a source of danger.

Yours, &c.,

Cavendish-place, Cavendish-square. JOSEPH T. CLOVER.

PARIS.

(From our own Correspondent.)

INCINERATION OF THE WIFE OF A MEDICAL MAN AT DRESDEN.

A RECENT number of a German medical journal gives the following picturesque description of a scene of cremation at Dresden. The body to be burnt was that of a young woman of twenty-three, the wife of a medical man, who during her life had expressed her determined wish to be reduced to ashes after death. Partly in a spirit of scientific observation and partly through a desire to ascertain the perfect organization of the measures employed for cremation, a company of savants, medical men, and official authorities of Dresden had met, with the permission of the friends of the deceased, to assist at the ceremony. In the midst of Siemens' manufactory had been erected a sort of funereal chamber, profusely ornamented with flowers, and in the centre of which was to be seen the coffin of the deceased. After a short and appropriate allocution from Siemens himself, the clergy having refused to attend, the body was pushed into the oven, and the iron door of the oven closed. A current of air, heated to the utmost degree, was let into the oven, and enveloped the delicate body of the woman, as could be seen through the iron gratings, with waves of fire vibrating distinctly and burning with a crimson light. It was not a thick smoking flame, causing swelling and distension of the body, but a real process of desiccation, extraordinarily rapid, producing evaporation of the chemically combined water, then heating the body, causing it to become red hot and afterwards white hot, and finally to fall to ashes. In all this there was nothing offensive to the smell or hearing. There was nothing in all that was seen through the iron gratings to shock the feelings of the woman's friends, except perhaps the unusual sight of a human body being reduced to ashes. In a short space of time the whole process, during which the liver and lungs seemed especially to resist, was terminated, and yesterday the ashes were gathered with suitable solemnity and confided to an urn.

INTRODUCTION OF WOMEN INTO THE PROFESSION.

A few days ago a special commission of Inspectors of the University sat in the Sorbonne for the purpose of examining candidates and granting the degree of capacity necessary for entering the Schools of Medicine and Pharmacy. Out of thirty-six candidates ten only were admitted. Amongst these latter was a Madame Astié, the wife of a well-known practitioner of the Faubourg St. Germain. She had already gained reputation in the world of arts by the publication of several musical compositions under the name of Marie de Valsayres. One of the tests was a critical appreciation of the characters of Molière's Misanthrope; and it must have been a pleasure of a new kind, remarks a contemporary, to hear the character of the great coquette Célimène discussed by a clever woman.

At one of the last sittings of the Examiners of the Montpellier School of Medicine and Pharmacy, a Madame André was declared competent, and got a diploma qualifying her to practise pharmacy in France.

HEALTH OF PARIS.

Notwithstanding the constant shower of snow, and most changeable weather of the last fortnight, the health of Paris may be considered to be at present excellent, and the rate of mortality very low compared to that of London and several of the European capitals. The number of deaths mentioned in the last weekly bulletin of the municipality was 803; that for the preceding week (ending December 18th) was 815. Of course, chest affections are especially prevalent. The last death bill mentions 42 cases of bronchitis and 78 of pneumonia.

ILLNESS OF DISTINGUISHED FRENCHMEN.

Two well-known Paris figures, Emile Pereire, the financier, and Louis Veuillot, the clerical polemist, are at present bedridden with bronchitis and asthma. The state of M. Emile Pereire was very alarming last week, but has improved since. General Faidherbe, the commander of the army of the north during the last war, is also suffering badly from attacks of intermittent fever, which disease he contracted during his prolonged stay in Africa as Governor of the French possessions in Senegal. The Prefect of the Seine, M. Ferdinand Duval, who had been ailing recently, through rather severe injury which he sustained in the knee from a fall on the Luxembourg staircase, is now better. The knee had been very dropsical.

PROSCRIPTION OF MEDICAL MEN.

According to the *Aerztliches Intelligenz-Blatt* of Bavaria, an Agram contemporary of the "Obzor," has bethought itself of adding quite a new and interesting feature to its columns. The novelty consists in the publication of all the cases of death in Agram, with the names of the medical men who attended each case facing those of the deceased. The Bavarian medical journal expresses great indignation at this feat of low journalism, and qualifies it as a proscription of medical men, which title I have used for this paragraph.

DISTRIBUTION OF PRIZES TO THE HOUSE SURGEONS AND CLINICAL CLERKS OF THE PARIS HOSPITALS.

Yesterday the Assistance Publique delivered its prizes to the candidates who had been successful in the various *concours* of this year for the house-surgeonship and dresserships of the Paris Hospitals. The gold medal for the *concours* between all the house-surgeons was given to M. Campenon (of la Charité), and the silver medal to M. Homolle (of the Enfants Malades). The candidates had to treat in writing of the following questions:—Anatomy and physiology of the pulmonary lobule; differential diagnosis of the various kinds of pneumonia. Two oral questions had also been put to the candidates successively: Diagnostic value of running from the ear in fractures of the skull; and diagnostic value of contraction. A prize, consisting of books and a surgical bag, was also given to the clinical clerk named first on the list of house-surgeons for this year. Finally the names of thirty-two candidates who had successfully competed for the house-surgeonship this year were proclaimed. The ceremony took place in the large amphitheatre of the Assistance Publique, and was presided over by the director, M. Nervaux.

Since yesterday a good portion of Paris is provided with the pure waters of the Vannes, brought from a distance through a system of immense iron pipes. The day before yesterday took place the final and critical experiment of the filling of the large reservoirs of Montsouris. It proved successful. The waters reached the reservoirs quickly, and filled them up in the required time. The consequence was the distribution of the Vannes waters to Paris on the next day.

Baron Nathaniel de Rothschild has made a present to the Israelitish Hospital of Vienna of the furniture of the room in which his father, Baron Anselm, died. At the same time he has established a foundation fund of 8000 florins, the interest

of which will serve for the maintenance of the inmates of his deceased father's chamber in the hospital.

It is announced that Professor Chauffard's course of lectures at the Faculty has been suspended on his own demand.

The marble busts of six departed Academicians have just been placed in the library of the Institute; amongst them are those of the illustrious Dupuytren and Larrey.

To-day (Monday, 21st) the Academy of Sciences will hold its annual sitting in the palace of the Institute. The chief feature of the meeting will be the eulogium of De La Rive by Professor Dumas. The annual report on the prizes of the Academy given away during the last year will be read by the President, M. Bernard. Amongst the laureates are MM. Luys, Magnan (whose name must be well known in England through the Norwich vivisection prosecution), Woillez (of Lariboisière Hospital), Legrand du Saulle, Fano, Mandl, Pellarin, Proust, and Ollivier. The prizes of the Academy are all more or less valuable, and are eagerly sought after by scientific workers, as they entail the title of Laureate of the Institute.

Paris, Dec. 21st, 1874.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Dec. 24th:—

Bailey, Samuel Henry, Nottingham.
Favell, Richard, Sheffield.
Homan, George William, King's College Hospital.
Lewis, David Howell, Brechfa, near Carmarthen.
Theed, William Cawood, Barkham, Wokingham, Berks.

The following gentlemen passed the Primary Professional Examination on the same day:—

Richard Bevan, Thos. Kennedy Fell, and John Tomlinson Knight, Guy's Hospital; Robert Bruce and William Collingridge, St. Bartholomew's Hospital; Thomas Arthur Cambridge and William George Clements, Middlesex Hospital; Horace Manders, St. Mary's Hospital; Charles Percy G. Townsend, Queen's Hospital, Birmingham.

THE JACKSONIAN PRIZE FOR 1874.—We hear that two essays for this prize have been sent to the College of Surgeons. One of them, however, it is stated, came too late. The regulations relating to this prize, as advertised, state that the dissertations must be delivered at the College before Christmas Day, 1874.

DEATH OF MR. KIERNAN, F.R.S., F.R.C.S.—The death is announced of Mr. Francis Kiernan, F.R.S., which took place on the 31st ult. The deceased was best known for his discoveries relative to the structure of the liver. The Royal Society recognised the value of Mr. Kiernan's researches by awarding him their Copley Medal in 1834, and electing him a Fellow in the following year. He was a member of the Senate of the University of London, and formerly Examiner in Anatomy and Physiology in that institution. He was elected on the Council of the Royal College of Surgeons in 1850, and in 1862 he succeeded Mr. Stanley as a member of the Court of Examiners.

Medical Appointments.

BROWNE, Mr. L., Surgeon to the Royal Society of Musicians, has been appointed also Aural Surgeon, vice Peter Allen, M.D., deceased.

CLARKE, F. W., M.R.C.S.E., has been appointed Certifying Factory Surgeon for Bury St. Edmund's, vice Hinnell, resigned.

COCKEY, E., M.R.C.S.E., has been appointed a Medical Officer to the Frome Cottage Hospital.

DAKEYNE, T. E., L.R.C.P.Ed., L.M., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Leek District and the Workhouse of the Leek Union, Staffordshire, vice Heaton, resigned.

DAVY, Dr. J., has been appointed Clinical Assistant at the West Riding Lunatic Asylum, Wakefield, vice Lawson, promoted.

DAY, E. O., M.R.C.S.E., has been appointed Resident Medical Officer to the Royal Infirmary for Children and Women, Waterloo-bridge-road, vice Leonard, resigned.

DUKE, D. W., L.R.C.P.L., M.R.C.S.E., has been appointed an Assistant-Surgeon to the East Sussex, Hastings, and St. Leonard's Infirmary.

FORBES, D. M'D., L.R.C.P.Ed., L.F.P. & S. Glas., L.M., has been appointed Medical Officer and Public Vaccinator for No. 1 District of the Basford Union, Nottinghamshire, vice Smith, deceased.

GILES, P. B., jun., L.R.C.P.Ed., M.R.C.S.E., L.M., has been appointed Medical Officer of Health for the Hay Rural and Urban Sanitary Districts: Fees; acreage 59,010; population 10,819.

HARRIES, T. D., L.R.C.P.L., M.R.C.S.E., has been appointed Hon. Surgeon to the Aberystwith and Cardiganshire General Infirmary.

HURD, J., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Medical Officer to the Frome Cottage Hospital.

M'KNOWN, W., L.R.C.P.Ed., L.F.P. & S. Glas., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Dirraw Dispensary District of the Ballymoney Union, Co. Antrim, vice M'Arthur, resigned.

MULLIN, P., L.R.C.S.I., has been appointed Superintendent Medical Officer of Health for the New Ross Urban Sanitary District.

NICHOLLS, W. H., M.R.C.S.E., has been appointed Medical Officer to the "Maid Marian" Court of the Ancient Order of Foresters, Brighton.

PACKARD, J., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for No. 7 District of the Blything Union, Suffolk, vice Horton, resigned.

PARSONS, F., M.R.C.S.E., has been appointed a Medical Officer to the Frome Cottage Hospital.

PARSONS, J., M.R.C.S.E., has been appointed a Medical Officer to the Frome Cottage Hospital.

POWELL, G. B., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.Dub., L.M., has been appointed Resident Medical Officer of the Nottingham Friendly Societies' Medical Institution.

RAYNER, E., M.D., has been appointed Public Analyst for the Borough of Stockport.

ROSSITER, T., M.D., has been appointed Sanitary Officer for the New Ross Urban Sanitary District.

SMITH, Mr. W. A., has been appointed House-Apothecary to the Bridgwater Infirmary, vice Gilbert, resigned.

SMYTH, W. J., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for No. 7, or Shipley District of the North Bierley Union, Yorkshire, vice Rutherford, resigned.

SPROULE, G. K., L.K.Q.C.P.I., L.R.C.S.I., has been appointed a Medical Officer to the Frome Cottage Hospital.

SUTTON, F., M.R.C.S.E., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Willingham District of the Gainsborough Union, and Medical Officer to the Willingham Lodge of Foresters, the Stow and Sturton Lodge of Foresters, and the Hutton Lodge of Odd Fellows, Marton,—all vice Smallman, deceased.

THOMAS, W. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of Health for the Maesteg Urban Sanitary District: £5 per annum; acreage 4000; population 6000.

TIDBURY, R., M.D., C.M., L.M., has been appointed House-Surgeon to the Male Lock Hospital, Dean-street, Soho-square, vice Tiley.

TREHARNE, J., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the newly formed No. 13, or Windhill District of the North Bierley Union.

WADD, T. H., M.R.C.S.E., has been appointed an Assistant-Surgeon to the East Sussex, Hastings, and St. Leonard's Infirmary, vice Ticehurst, resigned, and appointed a Surgeon.

YOUNGER, E. G., L.R.C.P.L., M.R.C.S.E., has been appointed Apothecary to the Middlesex Lunatic Asylum, Hanwell, vice Williams, appointed Medical Superintendent of the North Wales Counties Lunatic Asylum, Denbigh.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On the 23rd ult., at Royston, the wife of H. R. Archer, M.B., of a daughter.

BUCHANAN.—On the 27th ult., at Sowerby, Thirsk, the wife of John Hamilton Buchanan, M.D., of a son.

CLOVER.—On the 24th ult., at Cavendish-place, the wife of J. T. Clover, F.R.C.S.E., of a son.

DAWSON.—On the 23rd ult., at York-road, Brighton, the wife of R. Dawson, M.B., of a son.

GALTON.—On the 25th ult., at Woodside, Anerley-road, Upper Norwood, the wife of John H. Galton, M.D., of a daughter.

LE SUEUR.—On Oct. 29th, 1874, at Port Elizabeth, Cape of Good Hope, the wife of R. T. Le Sueur, M.D., District Surgeon, of a son.

MARRIAGES.

GREEN—BALDWIN.—On the 16th ult., at Lower Mitton Church, Stourport, W. E. Green, M.R.C.S.E., to Emily, adopted daughter of P. J. Baldwin, Esq.

ROGERS—COLIN.—On the 27th of Oct. last, at St. Thomas's, Beau Bassin, Mauritius, Henry Philip Rogers, M.R.C.P.L., to Alice Josephine Henriette, daughter of the Hon. G. B. Colin.

DEATHS.

BRUCE.—On the 19th ult., William Bruce, M.D., of Thurso.

CADLE.—Supposed to have perished in the "Cospatrick" Emigrant Ship on Nov. 19th at sea, James F. Cadle, M.R.C.S.E., the Surgeon.

KIRKPATRICK.—On the 7th ult., at Kirkcudbright, Wm. Kirkpatrick, Surgeon, late of Liverpool, aged 30.

OGLE.—On the 21st ult., Geo. Fortescue Ogle, M.B., of Monument-place, Liverpool.

O'TOOLE.—At Vernon-square, King's-cross-road, Richard Bernard O'Toole, L.R.C.S.I., Surgeon R.N., aged 36.

THOMSON.—On the 27th ult., Robt. Thomson, L.D.S. R.C.S.E., of Denmark-hill.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Churchill: Diseases of Women.
Mr. M. A. Ward: Outlines of Zoology and Comparative Anatomy.
Dr. Pettenkofer: Cholera—How to prevent and resist it.
Dr. Spender: Therapeutic means for the Relief of Pain.
Prof. Rebot: On Heredity.
Dr. Lucas: The True Action of Alcohol.
Dr. Cameron: Manual of Hygiene.
Dr. Nichols: Forty Years of American Life.
Mr. Jones: Songs for School Use.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, DEC. 31ST, 1874.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Dec. 25	29·78	N.W.	36	38	...	38	34	...	Overcast
" 26	30·00	N.W.	...	30	...	36	27	...	Overcast
" 27	30·10	WNW	33	35	...	35	30	...	Cloudy
" 28	30·25	W.	...	31	...	35	29	...	Cloudy
" 29	30·23	E.	...	28	...	30	26	...	Cloudy
" 30	30·31	S.E.	...	26	...	32	25	...	Foggy
" 31	30·26	E.	...	24	...	25	22	...	Foggy

Notes, Short Comments, and Answers to Correspondents.

A NEW PHASE OF JOURNALISM.

WHEN we recently originated the method of reporting week by week the meetings of the Medical Societies in the issue of our journal following the meeting, we fully expected that the profession would appreciate our efforts to bring the subjects discussed under their notice before they had lost their interest, and also to give a full and accurate account of the transactions of each Society. We hoped, moreover, to stimulate our contemporaries to an honourable rivalry, and to lead them to follow our example, and to publish their accounts in something less than the one, two, or three months which not unfrequently elapse between the meeting and the report. But we did not anticipate such a flattering tribute to the accuracy and ability of our reports as that they should be copied *verbatim* from our own by another journal in the week following their publication by us. One of our contemporaries has done us the honour to give our report of the discussion at the meeting of the Clinical Society on December 11th in full, but without stating whence it was taken. The only difference is that they have inserted abstracts of the papers read, which have been furnished by the authors, in place of our reports of the same. Henceforth the readers of the journal in question will have the satisfaction of knowing that should any errors appear in the reports of the meetings of Societies, they can refer to our columns of the preceding week to see whether they occur in the original, or are due to a mistake of the copyist. Thus, for example, we find that, by a typographical error, certain remarks which were made by Dr. Tilbury Fox at that meeting, and which in our report appear under his name, are ascribed to Mr. Hutchinson, who was not present at the meeting. But the only other alterations which we can find are two—viz., the change of "referred to" into "mentioned," and of "autopsy" into "necropsy," which are but slight errors. The value of this method of reporting is obvious; it will have the great advantage of ensuring uniformity, so that readers will not be puzzled by discrepancies between two reports, and it will also save a good deal of trouble to the conductors of the medical journal. We would suggest, however, that more care should be taken to give an exact copy of our report, and that it would be well to acknowledge the source from which it is drawn.

Dr. W. Roth, (Dresden.)—The work received with thanks.

THE VALUE OF DEATH-RATES.

To the Editor of THE LANCET.

SIR,—In consequence of the very limited time allowed me to discuss Dr. Letheby's paper at the meeting of the medical officers of health, I did not clearly state my case as regards the deaths of non-residents in hospitals and workhouses in London being charged in the Registrar-General's reports to the districts in which the deaths occurred. I mentioned that the deaths of patients in hospitals and in workhouses not belonging to the district are charged in the Registrar-General's Weekly Returns against the district in which they occur. In this manner above 2000 deaths of non-residents were entered amongst the deaths belonging to the Hackney district during the years 1861—71, raising the death-rate 17 per 10,000 population, as compared with districts in which there are neither hospitals nor extraneous workhouses. That the deaths in the German Hospital will be taken off perhaps some years afterwards when the death-rates are published in an annual report; but that the district will remain charged with above 1200 deaths in the City of London Union for some time longer, until the final corrections are made. I hoped, therefore, that these corrections for the metropolis would in future appear in each annual summary.

I remain, Sir, faithfully yours,

JOHN W. TRIPE,
Medical Officer of Health for the Hackney District.

Town Hall, Hackney, Dec. 22nd, 1874.

TREATMENT OF RECURRENT EPISTAXIS.

To the Editor of THE LANCET.

SIR,—Many years ago I read in Braithwaite's Retrospect of Medicine that quinine was *the* remedy in the above-named malady. I have tried it twenty times over, and never found it fail, although in the bulk of the cases very aged people were the patients. Yours truly,

Bow-road, E., Dec. 23rd, 1874. S. LAURENCE GILL.

A VERACIOUS CHRONICLE.

THE following rich gynæcological contribution is reported in the columns of the *American Medical Weekly* for Nov. 7th, 1874, by L. G. Capers, M.D., Vicksburg, Miss. Readers will not fail to observe the modest tone in which the author commences his description of the case. It will prove so interesting that we cannot forbear giving the whole *in extenso*.

"ATTENTION GYNÆCOLOGISTS!—NOTES FROM THE DIARY OF A FIELD AND HOSPITAL SURGEON, C. S. A.

"How common it is now-a-days, and how natural, too, for men to tell wonderful stories about 'the war;' their desperate charges; hair-breadth escapes; numbers who have fallen victims to their feats of personal valor, etc., etc. Then every surgeon has performed any number of wonderful operations before unheard of in the annals of surgery!

"Until the present moment, I have refrained from bringing before the public, and more particularly the Profession, any of my daring exploits or remarkable surgical procedures; and even now I feel a delicacy in offering the following remarkable case, the relation of which is prompted only by a sense of duty to my professional brethren. Doubtless many will pronounce the facts to be presently related as unusual or impossible; to such I need only say, if not, why not?

"Here are the proofs:

"On the 12th of May, 1863, the battle of R. was fought. Gen. G.'s brigade met the advance of Grant's army, under Gen. L., about one mile from the village of R. About three hundred yards in rear of my regiment was situated a fine residence, the occupants being a matron, her two daughters, and servants (the host being absent in another army). About 3 o'clock p.m., when the battle was raging most furiously, the above-mentioned lady and her two daughters (aged respectively fifteen and seventeen), filled with interest and enthusiasm, stood bravely in front of their homestead, ready and eager to minister to their wounded countrymen should they fall in the dreadful fray.

"Our men were fighting nobly, but pressed by superior numbers, had gradually fallen back to within one hundred and fifty yards of the house. My position being near my regiment, suddenly I beheld a noble, gallant young friend staggering closer, and then fall to the earth. In the same moment a piercing scream from the house reached my ear! I was soon by the side of the young man, and, upon examination, found a compound fracture, with extensive comminution of the left tibia; the ball having ricochetted from these parts, and, in its onward flight, passed through the scrotum, carrying away the left testicle. Scarcely had I finished dressing the wounds of this poor fellow, when the esteemable matron came running to me in the greatest distress, begging me to go to one of her daughters, who, she informed me, had been badly wounded a few minutes before. Hastening to the house, I found that the eldest of the young ladies had indeed received a most serious wound. A minnie ball had penetrated the left abdominal parietes, about midway between the umbilicus and anterior spinal process of the ilium, and was lost in the abdominal cavity, leaving a ragged wound behind. Believing there was little or no hope of her recovery, I had only time to prescribe an anodyne, when our army fell back, leaving both field and village in the hands of the enemy.

"Having remained with my wounded at the village of R., I had the opportunity of visiting the young lady the next day, and, interruptedly, for a period of nearly two months, at the end of which time she had entirely recovered, with no untoward symptoms during treatment; save a severe peritonitis, she seemed as well as ever!

"About six months after her recovery, the movements of our army brought me again to the village of R., and I was again sent for to see the young lady. She appeared in excellent health and spirits, but her abdomen had become enormously enlarged, so much so as to resemble pregnancy at the seventh or eighth month. Indeed, had I not known the family and the facts of the abdominal wound, I should have so pronounced the case. Under the above circumstances, I failed to give a positive diagnosis, determining to keep the case under surveillance. This I did.

"Just two hundred and seventy-eight days from the date of the receipt of the wound by the minnie ball, I delivered this same young lady of a fine boy, weighing eight pounds. I was not very much surprised; but imagine the surprise and mortification of the young lady herself, her entire family. This can be better imagined than described. Although I found the hymen intact in my examination before delivery, I gave no credence to the earnest and oft-repeated assertions of the young lady of her innocence and virgin purity.

"About three weeks from the date of this remarkable birth, I was called to see the child, the grandmother insisting there was 'something wrong about the genitals.' Examination revealed an enlarged, swollen, sensitive scrotum, containing on the right side a hard, roughened substance, evidently foreign. I decided upon operating for its removal at once, and in so doing, extracted from the scrotum a minnie ball, smashed and battered as if it had met in its flight some hard, unyielding substance.

"To attempt to picture my astonishment would be impossible! What may already seem very plain to my readers, as they glance over this paper, was, to me, at the time, mysterious. It was only after several days and nights of sleepless reflection that a solution flashed before me, and ever since has appeared as clear as the noon-day sun!

"What is it? The ball I took from the scrotum of the babe was the identical one which, on the 12th of May, shattered the tibia of my young friend, and in its mutilated condition, plunged through his testicle, carrying with it particles of semen and spermatozoa into the abdomen of the young lady, then through her left ovary, and into the uterus, in this manner impregnating her! There can be no other solution of the phenomenon! These convictions I expressed to the family, and, at their solicitations, visited my young soldier friend, laying the case fully before him in its proper light. At first, most naturally, he appeared sceptical, but concluded to visit the young mother. Whether convinced or not, he soon married her, ere the little boy had attained his fourth month.

"As a matter of additional interest, I may mention having received a letter during the past year, reporting a happy married state and three children, but neither resembling, to the same marked degree, as the first—our hero—Paterfamilias!"

THE DAVEY DEFENCE FUND.

FURTHER contributions have been received on behalf of the above Fund:—

	£	s.	d.		£	s.	d.
Dr. T. W. King	2	2	0	Dr. M. Corner	2	2	0
Fredk. Smith, Esq.	1	1	0	Mrs. Byles, sen., per Mr. Reilly	5	5	0
John Jackson, Esq.	2	2	0	S. B. Byles, Esq., per do. ...	5	5	0
Dr. M. J. O'Connor	1	1	0	Miss Byles, per do. ...	2	2	0
Dr. S. Fenwick	2	2	0				
C. F. Maunder, Esq.	2	2	0				

A PHENOMENON OF JUVENILE DEPRAVITY.

A BOY named Pomeroy, who was accused of the murder of two children, has been tried in Boston and convicted. The evidence showed (the *New York Times* says) that the boy, from childhood, had exhibited unnatural and monstrous tendencies of character. When nine or ten years old he had maimed and tortured his younger companions. There was no apparent motive for these actions, nor for the murder of the Millen boy, of which he was convicted, nor that of the Curran girl, which he confessed. If ever there was a case of partial paralysis of the moral faculties, it was here. But the boy knew enough about morals to commit his crimes in secrecy, and to enjoin silence upon the victims of his cruelty. He provided himself beforehand with means to accomplish his unaccountable purposes; he reasoned before and after the commission of his bloody deeds. Naturally, therefore, the whole case turned on the question of the boy's moral responsibility. The evidence of eminent physicians who have made the study of insanity a specialty was brought forward, and the argument of the prosecuting attorney, based upon their testimony, was that the prisoner was of sound mind when the offences were committed. The verdict was a mixed one—guilty of murder in the first degree, with a recommendation that the punishment be imprisonment for life. The jury would not recognise such a thing as "uncontrollable impulse" in the commission of a crime; he was found guilty of a crime which has been defined by the Legislature as "murder in the first degree." Sentence was reserved.

THE TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—In the report of a meeting of the Medical and Chirurgical Society which appears in your journal of the 17th ult., it is stated that Surgeon Hall made the following remark: "With regard to the use of morphia, eight cases of collapse treated by the hypodermic injection of morphia with quinine by Dr. Alex. Smith had all died." Mr. Hall must have laboured under a misapprehension when he made this statement, as I have never treated a single case of cholera in the manner asserted by him. The plan of treatment suggested by me for trial in cholera, and which is based on views as to the nature and pathology of that disease altogether different from those advanced by Mr. Hall, were detailed in a small work published by me for private circulation in January, 1873. In that publication it is distinctly intimated that it was my wish that the mode of treatment therein suggested should be put to the test solely by independent observers. Even had I intended it to be otherwise, the nature of the duties I have been employed upon for the last five years would have rendered that impossible. I have not visited a case of cholera since 1869. So far as I have been able to learn from personal communications and from a perusal of the cholera registers and reports prepared by British medical officers serving in the Bengal command, which have passed through my hands in my capacity of statistical officer, only a few partial trials of some portions of the plan of treatment I have suggested would appear to have been made—in some instances with favourable results, but far more frequently otherwise. I therefore believe that I am fully justified, under all the circumstances, in affirming that, so far as I know, the plan of treatment suggested by me has hitherto remained virtually untried. I regret to observe that the form in which Mr. Hall's remark has been framed is calculated to mislead as to the nature of my suggestions. This, however, I will endeavour to remedy as soon as possible by placing my views within reach of the medical profession generally.

In a matter of such grave importance as the treatment of cholera undoubtedly is, I trust I may be pardoned if I venture to supplement Mr. Hall's statement with regard to the results of his plan of treatment by detailing some facts regarding them, which can only, I feel assured, have failed to have been laid by himself before the members of the Medical and Chirurgical Society in consequence of his ignorance of their existence. They are as follows.

In October, 1873, the late Surgeon-General Dr. Beatson issued a circular to all British medical officers serving in the Bengal command, suggesting that a careful trial should be made by them of Mr. Hall's plan of treatment, and giving some details of the method to be followed. The only approach to an epidemic outbreak of cholera of any severity which has occurred since the date of the issue of the circular in question happened at Lucknow in October and November, 1873, and Surgeon-Major Scott and Surgeon Ruxton, doing duty at that station, submitted at the close of the outbreak separate reports to the Surgeon-General on the results of the treatment which they had employed in accordance with the instructions contained in his circular. Those reports I now learn were forwarded to the Director-General, and no copy of either has been kept in the Surgeon-General's office here. Both reports were, however, on reaching Simla, sent to me for perusal, and I then for my own information made the following memorandum of their purport:—

"*Results of the hydrate of chloral treatment of cholera, tried by order of the Surgeon-General at Lucknow in the 1st Bat. 17th Regiment, in October and November*, 1873.—Thirteen attacks and ten deaths. In ten cases hydrate of chloral was fully tried, as directed, with no good result. In two cases it was tried in conjunction with other remedies, among which were quinine, opium, and quassia. Both cases recovered. In one opium and quinine were the chief remedies employed, and only one full dose of hydrate of chloral was given by the mouth to procure sleep after the choleraic symptoms had ceased. This case also recovered. The observations were made independently by Surgeon-Major Scott and Surgeon Ruxton, both of whom furnish reports which coincide in stating their belief that the remedy is virtually powerless against cholera. The medical officer last named recommends that hydrate of chloral should not in future be employed to the exclusion of other remedies. He thinks it might be of value as an auxiliary to other means."

Should it be deemed, in the interests of the medical profession, desirable to publish the original reports, I feel assured that the present Director-General would at once afford every facility for doing so were a request preferred to him on the matter.

I am, Sir, your obedient servant,

ALEX. SMITH, M.D., Surgeon-Major,
Statistical Officer to the Surgeon-General and P.M.O.,
Simla, Nov. 18th, 1874. British Forces in India.

A REMARKABLE MAN.

M. AUBERT-ROCHE, who for twelve years had under his control the sanitary arrangement during the works of the Suez Canal, has just died at Paris. He was physician of the hospital of Alexandria when the plague broke out, and remained at his post along with Rigaud, whilst all the medical men had taken to flight. M. de Lesseps, who was then Consul of France, also made a good stand, and thus a friendship sprang up between Aubert and the illustrious originator of the Canal. Nothing could surpass the care with which the former organised his hospital and the care of the sick during the carrying out of the works, and to his energy some share of the success of the enterprise is due. He was one of the promoters of the Medical Congress of 1845, and, with Richelot and Amédée Latour, founded *L'Union Médicale* twenty-eight years ago. M. Aubert-Roche was just sixty-four years of age.

IMPERFORATE URETHRA.

To the Editor of THE LANCET.

SIR,—About a year ago I had a case almost exactly similar to the one described by Dr. Edis in your number of Dec. 19th. In my case, as in his, the sides of the urethra were either adherent or else the canal ended in a cul-de-sac about an inch from its proper termination. I made a small longitudinal incision where the orifice should have been, and attempted to introduce a probe. At first I was only partially successful; but the next day, using more force, the obstruction was overcome, and a stream of urine escaped. The after-treatment was the same as that adopted by Dr. Edis, and was successful. Yours &c.,

Bawtry, Yorkshire, December, 1874. L. W. EVANS.

To the Editor of THE LANCET.

SIR,—In your issue of December 12th, Mr. Grubb wishes to be informed "whether imperforate urethra is rare." Only one case of the kind has come under my notice since I have been in practice, and that occurred in the year 1862. I did not notice the malformation at the birth, and the child was otherwise well developed; but on visiting the mother on the following day I ascertained that the child had not micturated. On examination I found a slight depression in the situation of the meatus, and there was neither epi- nor hypo-spadia. I accordingly made an incision with a sharp-pointed bistoury in the course of the urethra to the depth of about a third of an inch, and then passed a probe, bent into the form of a catheter, into the bladder. A copious stream of urine followed the withdrawal of the probe, and no further treatment was required. A few years afterwards I had an opportunity of examining the child, and the penis then presented the appearance of hypospadia, there being a deficiency of the under surface of the urethra to the extent of more than a quarter of an inch, probably the result of my incision.

Another correspondent, Dr. Webb, who relates in last week's LANCET the case of a child who swallowed a piece of lead without experiencing any inconvenience, reminds me of a similar accident which happened in September last to an infant, aged seven months, to whom I was summoned. The child was sleeping quietly when I arrived; but the mother informed me that two hours previously, while lying on his nurse's knee, he had swallowed a metal bell which had become detached from a rattle. The following morning, fifteen hours after it had been swallowed, the piece of metal was expelled per anum without any difficulty. It measured nearly an inch in its longest diameter, and was in form very like the shell known as the "common poached-egg cowry." Yours obediently,

Sandon, Stone, Dec. 22nd, 1874. J. H. TYLECOTE, M.D.

"FALSE TONGUE."

A DISEASE so named is said by the Visalia *Delta* to have appeared in the neighbourhood of the Tule River. Dr. Henrahon has had several cases. The affection begins with itching on the inferior surface of the tongue towards its root, from which, it is stated, commences the growth of a fungus resembling a tongue, which speedily fills the mouth and protrudes from it, causing suffocation unless removed. The statement of the occasionally rapid growth of the fungus—to wit, two inches in an hour—is probably an exaggeration.

CHILBLAINS.

To the Editor of THE LANCET.

SIR,—In answer to "F.R.C.S." in this week's LANCET, I can with confidence recommend cajeput oil as a remedy. After trying a great many other local applications, I found out by mere chance the virtue of it in this way: I had a visitor in my house very much troubled with chilblains, and knowing that various applications had been used without effect, I thought I would try cajeput, and with the happiest effect. I have used it frequently since, and never found it fail. Often one application cures; but in inveterate cases the chilblains ought to be freely rubbed night and morning, or oftener if the irritation is great. A small dose of sulphur and milk in the morning is a good thing in addition to the above treatment.—Yours &c.,

Cheltenham, Dec. 26th, 1874. L. ROBERTSON, M.R.C.P.

M. PITHA.

THIS eminent Vienna surgeon has, we are glad to say, almost recovered his health after a very severe illness, and is able to see patients. M. Pitha is highly esteemed in the Austrian capital, and greatly prized as an operator. It will be remembered that he is publishing a great surgical work in conjunction with Billroth.

J. A.—Yes.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—The communication of Dr. Muscroft in your impression of Dec. 19th, if it proves, or at all events renders it probable, that the saliva of a healthy dog, if absorbed into the circulatory system, is capable of producing hydrophobia, suggests the question whether this, if true, may not be owing to the fact that the dog perspires by his tongue, and that his saliva may consequently be exceptionally charged with deleterious products. Other animals perspire by the tongue who neither suffer from nor cause hydrophobia, I am aware; but dogs are exceptional animals in some points. What is the proportion of dogs and bitches subject to hydrophobia? I think the question has been before discussed in THE LANCET. Yours &c.,

December 25th, 1874. CANOPHILUS.

A TRANSFUSER IN TROUBLE.

THE *Allg. Wiener Med. Zeit.* of Dec. 22nd, 1874, states that a Dr. Fieber, of Vienna, judged transfusion necessary in the case of a lady named Lucca (whether the patient is the accomplished Covent-garden *prima donna* we know not), and engaged the services of a surgeon for that purpose. A lamb was procured, but the veins either would not give blood, or no vessels could be found; at all events the operation could not be performed. The lamb died, and the lady is no worse for the failure. Yet the authorities have begun proceedings against the doctor. Almost the counterpart of the Norwich affair. The Editor properly remarks that an investigation would be justifiable had the lamb lived and the lady died.

Bobus.—Lumley's Manuals for Poor-law Officers, "The Medical Officer," published by Messrs. Knight and Co., 90, Fleet-street.

THE PROPOSED HOSPITAL AT HAMPSTEAD.

To the Editor of THE LANCET.

SIR,—I hold the opinion of my old friend THE LANCET in such high esteem that I am unwilling to permit him to state without putting in a disclaimer that I have misquoted him, or even quoted him carelessly, as stated in the article on Hampstead Hospital in this day's issue. The report in *The Times*, on which it is founded, is no doubt sufficiently exact for the purposes of its readers, who would be little interested in anything I might say on this subject; but it is necessarily only an epitome, and if I had been reported fully you would have found that my remarks, instead of being deprecatory of your action, were just the reverse.

I had been commenting on the course pursued by the general press, pointing out that, although many of the journals had attacked the Asylums Board warmly, and inserted long and sometimes violent articles against us, they had none, with the single exception of the *Clerkenwell News*, so far as I knew, had the fairness to insert our reply, although we had sent it to each of them. I then contrasted with this the action of THE LANCET in the following terms: "I was glad to say that THE LANCET had acted differently. Although it had in the first instance been somewhat led away by the clamour against us, it had since had the fairness to send one of its undoubtedly able staff to examine into the matter, and furnish it with an independent report, and it is only right to say that that report is a very impartial one." I then quoted the two questions your Commissioner set himself, and the answers he arrived at, reading them *in full* from your article. I am at a loss, therefore, to perceive how my account of your statements is at all open to the charge of carelessness, or that I have drawn any unfair deductions from them.

I may add that my remarks had to do solely with the *removal* of the hospital, not at all with its original establishment in this position, upon which I did not touch. Had I done so, it would have been sufficient to quote the concluding paragraph of your Commissioner's report, wherein he states his belief that "the necessity for a hospital in this neighbourhood cannot be seriously questioned," to prove the greater part of the case of the Board; for although he also says, "as to the site we think there is no question that a more suitable one might be found," this is a mere general assertion not borne out by fact. Before purchasing this site, the Board exhausted every means in its possession to find the least objectionable one in the district, and could meet with nothing better than this. Not only so, but we have over and over again from the very first challenged the objectors to show us a better; and though they have often spoken generally of their ability to do so, they have never so much as named one, and we have every reason to believe that none exists. Indeed we have only had one which could in any way be regarded as an alternative site brought under our notice, and that was so much more objectionable in many respects that it could not be entertained. One of several objections will be sufficient for you—viz., the absence of any means of proper drainage. When pushed on this point, these gentlemen say, "Oh, take it twenty miles away out of town," or "take it to the breezy hills of Surrey"; and I see the most recent recommendation is, "Establish large floating three-storied hospitals on the Thames," all of which suggestions are, as you know very well, simply ridiculous.

Perhaps you will permit me to take this opportunity of supplying some information which your Commissioner regrets not possessing—viz., the exact purpose for which the Board intends this hospital. It is hoped that it may only be required as a *reserve* hospital, to be used in case of severe epidemic. We trust that Homerton and Stockwell may be sufficient for the ordinary requirements of the metropolis, as they have proved so far in the present epidemic of scarlatina; but experience has shown that special occasions may require something beyond their resources, and for these occasions it is our duty to make timely provision. It is obvious that this destroys the chief objection of the Hampstead residents. In ordinary times the hospital will not be used for infectious disease; while, should its use become necessary, it will only be when some epidemic has been extensively prevalent, and when Hampstead has already, in all probability, shared with the rest of the metropolis in being attacked, as your Commissioner has so well shown was the case on the last occasion, when "the district was already steeped in small-pox months before a single case had been taken to the hospital."

Finally, I must protest against your repeated assumption that "the Board has acted in a high-handed, unconciliatory manner" in this matter, and consequently that "we are not likely even to read, much less to attend, to your recommendations," *et similia*. When and how have we done this? To anything like the sensible article of your Commissioner, whether written or spoken, we should at any time pay all due attention, and some of the improvements which have suggested themselves to him have already been determined on by the Committee of Managers—e. g., increasing the height of the boundary wall, and altering the position of the mortuary. Probably also the position of the blocks may be somewhat altered in rebuilding. But this is about the first time we have had anything either sensible or temperate addressed to us. Previously we have had nothing but violent abuse or suggestions and "arguments" (save the mark!), such as I have already quoted, simply absurd from the crass ignorance of the merest elements of the subject which they betray. To these we turn a deaf ear. The duties imposed upon us in providing for the requirements of the sick poor, and protecting the metropolis from the spread of epidemic disease, are too important, and already make too heavy drafts upon our time, to permit us to go out of our way to notice either abuse or foolishness.

Believe me yours very truly,

Kennington-park-road, Dec. 26th, 1874. WILLIAM S. CURTIS.

FIJI ISLANDS.

A CORRESPONDENT some months ago sought for information through our columns respecting the eligibility of Fiji as a field for medical labour. We have this week received a letter on the subject from Dr. Messer, of Her Majesty's Navy, who states that until the white population shall have considerably increased, there is actually no opening there for members of our profession. Levuka, the only European town in the group of islands, with a population of 500, is already provided for; while the remaining white settlers are so scattered that it would not pay anyone as yet to attempt to practise there. The recent annexation of Fiji to this country, however, may cause an influx of settlers. The country is described as lovely, and full of interest to the student of natural history.

Mr. Gibson.—It is now in force.

COMBINED CLINICAL THERMOMETER AND STETHOSCOPE.

To the Editor of THE LANCET.

SIR,—A letter in your impression of the 5th inst. from Mr. T. S. Smith draws the attention of the profession to certain advantages derived from combining the stethoscope and clinical thermometer so as to form a single package.

I may state that in 1869 I exhibited at the annual meeting of the British Medical Association, and also at the annual Museum held at Leeds, stethoscopes containing clinical thermometers within their tubular portions. The bulbs were protected by little india-rubber caps. This combined clinical thermometer and stethoscope was introduced by me to the notice of my brethren during the reading of a paper on Clinical Thermometers. I may add that I have ever since that time employed the stethoscope as a case for my clinical thermometer, and the result has been that the latter instrument has been, as it should be with every practitioner, as much a *vade-mecum* as the stethoscope.

Your obedient servant,

Chelmsford, Dec. 7th, 1874. CORNELIUS B. FOX, M.D.

DR. LIVINGSTONE.

THE day before Christmas a large black marble tombstone was laid over the grave of Dr. Livingstone in Westminster Abbey. The stone bears the following inscription in letters of gold:—

Brought by faithful hands
Over land and sea,
Here rests
DAVID LIVINGSTONE,
Missionary, Traveller, Philanthropist;
Born March 19, 1813,
At Blantyre, Lanarkshire.
Died May 1, 1873,
At Chitambas Valley, Ulala.
For thirty years his life was spent in
An unwearied effort to Evangelize
The native races, to explore
The undiscovered secrets and
Abolish the desolating slave-trade
Of Central Africa,
Where with his last words he wrote:

"All I can do in my solitude is, May Heaven's rich blessing come down upon every one—American, English, Turk—who will help to heal this open sore of the world."

On the right edge of the tomb are the following lines:—

Tantus amor veri—
——— Nihil est quod noscere malim
Quam fluvii causas per secula tanta latentes;

And on the left-hand edge the following text:—

"Other sheep I have, which are not of this fold: them also I must bring, and they shall hear my voice."

THE MARTINI-HENRY RIFLE.

To the Editor of THE LANCET.

SIR,—In your impression of Nov. 14th are some remarks relative to the above rifle, which I beg to correct, more especially as a similar misrepresentation of the results of the trial of the weapon by the 60th Rifles has also twice appeared in the *Army and Navy Gazette*.

The facts of the case were, that to test, not the well-known capabilities of the rifle, but its "recoil" and "beating" tendencies, twenty men of the battalion were selected to fire 160 rounds at skirmishing, "file," and "volley firing" in as quick succession as the heating of the rifle &c. would admit; and of these twenty men submitted to me next morning for examination, I found that all, with one exception, bore extensive marks of contusion, amounting in one instance to seven by four inches at the point of the shoulder and external half of clavicle. And I gave it as my opinion (in a general way) that the same men could not undergo the same exercise next day to the trial without its inflicting serious pain and injury on them.

Yours faithfully,

December, 1874. W. S. OLIVER, M.D., Surgeon-Major.

MALE HYSTERIA (?).

To the Editor of THE LANCET.

SIR,—It would be very gratifying to me to learn the exact process of reasoning by which deception in a patient has come to be called hysteria. Still more, by what figure of speech an instance of deception in a man can appropriately be termed male hysteria. We have all heard of the worthy magistrate who, whenever there was a *fracas*, exclaimed, Where *is* the woman? But the question here is, Where is the uterus? If the nomenclature as well as the pathology be faulty which referred a depressed and perverted morale to an abnormal condition of the uterus and ovaries in the patient herself, how much more is it absurd to refer a similar state in a man to the reproductive organs of some unknown woman! If the term hysteria had a definite signification, it might be retained; but as it has not, the sooner it is expunged from rational medicine the better. What is really wanted is an accurate analysis of the psychological condition of all such patients. In the meanwhile do let us call a spade a spade.

I am, Sir, yours obediently,

Clapton, Dec. 29th, 1874. D. DE BERDT HOVELL.

Compos Mentis wishes to know of an asylum or institution where, for a small payment of say 10s. to 12s. per week, they would receive an old gentleman sixty-nine years of age, who has been gradually becoming insane for twelve months. He is not violent, and his bodily health is good; but, being rather feeble, requires some little amount of attention. He has been pronounced ineligible for an ordinary lunatic asylum.

INVALID BED.

To the Editor of THE LANCET.

SIR,—I see in your journal of the 19th inst. an inquiry made by Mr. T. Scattergood, of Leeds, for a bed so constructed that invalids can raise themselves at any angle. I have such in use in my family, and shall feel happy to furnish him with any information. Yours truly,

Bath-road, Lymington, Hants, Dec. 24th, 1874. CHAS. RASHLEY.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir H. Thompson, London; Dr. Brown-Séquard; Dr. Robert Barnes, London: Prof. Spence, Edinburgh; Dr. George Johnson, London; Prof. Gamgee, Birmingham; Dr. Redwood, London; Dr. McCall Anderson, Glasgow; Dr. Broadbent, London; Dr. Buzzard, London; Mr. Teale, Leeds; Mr. Hulke, London; Dr. Moxon; Mr. Teevan, London; Mr. Symonds, Oxford; Mr. Morgan, Oxford; Dr. Messer, Fiji; Mr. L. Robertson, Cheltenham; Mr. Kempe, Notting-hill; Dr. Hunter, Matlock-bridge; Dr. Geo. Thompson, Oldham; Mr. Mackintosh, Downham, Norfolk; Dr. Williams, Denbigh; Mr. Orton, Stockport; Dr. Daly, London; Dr. Tannahill, Glasgow; Mr. Nankivell, Chatham; Mr. Williams, Northgate; Mr. Rashley, Lymington; Dr. Roth, Dresden; Mr. Philpot, London; Mr. Reilly, London; Dr. Ralfe, London; Mr. Maunder, London; Dr. Wiltshire, London; Miss Banting, Norwich; Mr. Reeves, London; Dr. De Lisle Allen, London; Mr. Samuel Mason, Tywanreath; Dr. De Berdt Hovell, London; Dr. Shearman, Rotherham; Mr. Clover, London; Mr. Haward, London; Mr. Davidson, Edinburgh; Dr. Sheen, Cardiff; Mr. Lloyd, London; Mr. Wilson, London; Mr. Wigg, Southminster; Mr. Gill, Bow; Mr. Fairweather, Brechin; Dr. Underwood, Boston, U.S.A.; Dr. Rhys Williams, London; Dr. Ferguson, Cheltenham; Dr. Rutherford, Glasgow; Dr. Laycock, Edinburgh; Mr. Gowland, Durham; Mr. Cass, Goole; Mr. Roberts, Conway; Mr. Smith Ford, London; Mr. Fairey; Mr. Walker, Glasgow; Dr. Madge, London; Mr. Foxe, Coad's Green; Mr. Sweeting, Basingstoke; Messrs. Deighton and Co., Cambridge; Mr. Owens, London; Mr. McKenna, Belfast; Mr. Leach, Sheffield; Messrs. Southall and Co., Birmingham; Mr. Poole, London; Messrs. Oliver and Boyd, Edinburgh; Mr. Luxton, Tavistock; Mr. Grigg, London; Mr. Wilmshurst, Woodville; Mr. Burdett, London; Dr. Smith, Kilburn; Mr. Elliott, Westmineter; Mr. Robinson, Denbigh; Dr. Eastes, London; Mr. Willmore, Stockbridge; Messrs. Ferris and Co., Bristol; Messrs. Richardson and Co., Leicester; Dr. Macpherson, Chichester; Dr. Lory Marsh, London; Mr. Kenyon, Bellingborough; Mr. Powell, London; Mr. Cumming, Wigtown; Mr. Kerr, London; Mr. C. Gaffney, London; Dr. Tibbits, London; Mr. Woodall, Scarborough; Mr. Organ, Selby; Mr. Macnab, Stirling; Mr. Whitaker, Derby; Dr. Lush, Weymouth; Messrs. Chapman and Co., London; Dr. Gilmour, Danlochee; Mr. Glyde, Ipswich; Dr. Adamson, Hetton-le-Hole; Mr. Hill, London; Dr. Mason, Sheffield; Messrs. Black and Leech, Bath; Royal Academy of Arts; M. P. O., London; J. A.; L.S.A., London; T. R. B., Birmingham; The Director-General of the Medical Department of the Navy; &c. &c.

LETTERS, each *with enclosure*, are also acknowledged from—Mr. Pennington, Blackburn; Mr. Evershed, Bega, New South Wales; Mr. Cresswell, Norwood; Mr. Allen, Hastings; Dr. Whitmore, Hounslow; Mr. Land, Exmouth; Mr. Allsworth, Romsey; Mr. Buck, London; Dr. Harrison, Haslingden; Mr. Palmer, Forres; Mr. Green, Preston; Mr. Hodgson, St. Helens; Dr. Campbell, Ironville; Mr. Corin, Liskeard; Dr. Mudd, Storrington; Mr. Collingwood, Corby; Mr. Creuse, Newport Pagnell; Mr. Crossman, Hambrook; Mr. Cooper, Needham Market; Dr. Farrar, Chatteris; Mr. Williams, Sunderland; Mr. Lipscomb, Tring; Mr. Marsh, Ross; Messrs. Sadler and Lancaster, Barnsley; Dr. G. Hills, Chiswick; Dr. Galton, Norwood; Mr. Carolan, Great Clacton; Mr. Gibbs, Tring; Mr. Kershaw, Manchester; Dr. Curran, Lew Down; Dr. Buchanan, Thirsk; Mr. Robinson, Salford; Mr. Evans, Evesham; Rev. C. Hall; Dr. Munro, Nettlebed; Mr. Jackson, Wilton; Mr. Arrowsmith, Darlington; Mr. Gibbs, Tring; Messrs. Kelly and Piet, Baltimore; Dr. Cooke, Walsall, Mr. Sandford, Twickenham; Mr. Gilbert, Cradley; Mr. Phillips, Kidderminster; Mr. Wilcox, Alrewas; Messrs. Evans and Co., Liverpool; Mr. Sweetman, Wincanton; Mr. Fildew, St. Pancras; Mr. C. Robinson, London; Mr. Such, London; Mr. Sanderson, Campbelltown; Mr. Sharp, Callen; Mr. Shoneding, Sahonnpore, India; Mr. Piggott, Brandon; Dr. Tweedie, Hackney; Mr. Johnstone, Leighton Buzzard; Mr. Hunt, Bushey; Messrs. Sieman and Brother, Indiana; Dr. Hurley, Swansea; Dr. Sands, New York; Mr. Edwards, Woodford; Mr. Perkins, Exeter; Mr. Duckworth, Otley; Mr. Sligo, New Brompton; Mr. Price, Tipton; Mr. Knock, Wigston Magna; Mr. Morris, Hounslow; Dr. Anderson, Edinburgh; Mr. Burge, Shepherd's Bush; Y., Kirby Stephen; Medicus, Sheffield; C. F. G., London; G., Rugby; J. Q. S., Cheshsm.

Bridlington Free Press, Jewish World, Surrey Advertiser, Metropolitan, Newcastle Daily Chronicle, Sheffield Daily Telegraph, Huddersfield Chronicle, Sunday Times, Broad Arrow, Examiner, Women and Work, Country, Birmingham Daily Post, South-Eastern Advertiser, Cork Constitution, Agricultural Gazette, East London Observer, Spectator, Western Lancet, Welshman, Lincoln Gazette, California Advertiser, Liverpool Daily Post, Cape Argus, Isle of Man Times, Indian Medical Gazette, and *Manchester Guardian* have been received.

Medical Diary for the ensuing Week.

Monday, Jan. 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures: Mr. C. F. Maunder, "On the Surgery of the Arteries."

Tuesday, Jan. 5.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Gladstone, "On the Voltaic Battery: The History of the Battery in its various Forms." (Juvenile Lecture.)
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M. Annual Meeting for Election of Officers, Report, Address, &c.—The following Preparations will also be exhibited: Sarcoma of the Sclerotic; Aneurism of Mitral Valve; Specimens of Urinary and Biliary Calculi; Congenital Dislocation of both Hips (a living subject); Large Lymphangioma secreting Clyle (a living subject); Hypertrophy of Limb from Disease of Knee-joint (a living subject); Hypertrophied Bursa Patellæ removed by Operation; Epithelioma of the Colon; Complete Cancerous Occlusion of the Rectum in a Girl aged eighteen years, Colotomy; Extreme Ulceration of the Rectum cured after Colotomy; Microscopical Specimen of Melanoid Sarcoma in a Codfish; Microscopical Specimens of Cancer prepared by a new process; Internal Stricture, with Rupture of Cæcum; &c. &c.

Wednesday, Jan. 6.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Annual Meeting.—Election of Officers.—President's Address.—Dr. Bathurst Woodman, "On the Treatment of Mammary Abscess by Rest."—Dr. Madge, "On a Case of Labour complicated by Pelvic Tumour and by Convulsions."—Mr. Ashburton Thompson, "On Zinc Phosphate in Cases of Amenorrhœa."

Thursday, Jan. 7.

ST. GEORGE'S HOSPITAL.—Operations 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Prof. Gladstone, "On the Voltaic Battery: Electrotyping, &c." (Juvenile Lecture.)
HARVEIAN SOCIETY OF LONDON.—8 P.M. Annual Meeting.—Election of Officers.—President's Address.—Conversazione.

Friday, Jan. 8.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Teevan will exhibit a Case of Subcutaneous Urethrotomy.—Dr. Farquharson, "On a Case of Hæmoptysis in a Syphilitic Patient."—Mr. T. Holmes, "On a Case of Naso-pharyngeal Polypus."

Saturday, Jan. 9.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Gladstone, "On the Voltaic Battery: The Electric Telegraph." (Juvenile Lecture.)

TERMS OF SUBSCRIPTION TO THE LANCET.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year..... £1 13 6 | Six Months..... £0 16 3

TO THE COLONIES AND INDIA.

One Year..... £1 14 6

Post-office Orders in payment should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable to him at the Post-office, Charing-cross.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under .....£0 4 6 | For half a page £2 12 0
For every additional line..... 0 0 6 | For a page 5 0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.